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Environmental Assessment
DOI-BLM-UT-C020-2011-043-EA

August 2012

November 2012 Oil and Gas Lease Sale

Location: Color Country District, Richfield Field Office
Sevier County, Utah

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1.0 PURPOSE & NEED

1.1 Introduction

The Bureau of Land Management (BLM) has prepared this environmental assessment (EA) to disclose and analyze the environmental consequences of the sale of six parcels totaling 10,634 acres during the November 2012 oil and gas lease sale and subsequent lease issuance to successful bidders. Site visits to all parcels were made by field office resource specialists on August 30, 2011 and March 29, 2012. The EA is a site-specific analysis of potential impacts that could result from the implementation of a proposed action or alternatives to the proposed action. The EA assists the BLM in project planning and ensuring compliance with the National Environmental Policy Act (NEPA), and in making a determination as to whether any significant impacts could result from the analyzed actions. Significance is defined by NEPA and is found in regulation 40 Code of Federal Regulations (CFR) 1508.27. An EA provides evidence for determining whether to prepare an Environmental Impact Statement (EIS) or a statement of Finding of No Significant Impact (FONSI). A FONSI statement, for this EA would document the reasons why implementation of the selected alternative would not result in significant environmental impacts (effects) beyond those already addressed in the Richfield Field Office Record of Decision and Resource Management Plan (RFO ROD/RMP; BLM, 2008). If the decision maker determines that this project has significant impacts following the analysis in the EA, then an EIS would be prepared for the project. If not, a Decision Record may be signed for the EA approving the selected alternative, whether the proposed action or another alternative.

1.2 Background

In general, the BLM Utah State Office (USO) conducts a quarterly competitive lease sale to sell available oil and gas lease parcels in the state. In the process of preparing a lease sale, the BLM USO compiles a list of lands nominated and legally available for leasing, and sends a draft parcel list the appropriate District Office where the parcels are located. Field Office staff then review and verify that the parcels are in areas available for leasing; that any new information that has become available, or any circumstances that have changed, are assessed to determine what level of analysis is required; that appropriate stipulations and notices can be included; that appropriate consultations have been conducted, when necessary; and that any special resource conditions are identified for potential bidders. The Field Office then either determines that existing analyses provide an adequate basis for leasing recommendations or that additional NEPA analysis is needed before making a leasing recommendation. In most instances an EA will be initiated for the parcels within the Field Office to meet the requirements of Washington Office (WO) Instruction Memorandum (IM) 2010-117. After the EA is complete, a list of available lease parcels and stipulations is made available as part of the analysis and also made available to the public for a 30-day public comment period on the BLM webpage¹ and the Utah

¹ Accessed online at: http://www.blm.gov/ut/st/en/prog/energy/oil_and_gas/oil_and_gas_lease.html

Environmental Notification Bulletin Board² (ENBB). After analyzing and incorporating (where appropriate) comments received during the public comment period, changes to the document and/or lease parcels list are made, if necessary. The document is made available again for the protest period (30 days). The protest period ends 60 days before the scheduled lease sale and a list of available lease parcels and stipulations is made available to the public through a Notice of Competitive Lease Sale (NCLS). Lease stipulations and notices applicable to each parcel are specified in the sale notice.

This EA is being used to determine the necessary administrative actions, stipulations, lease notices, special conditions, or restrictions that would be made a part of an actual lease at the time of issuance. Under all alternatives, continued interdisciplinary support and consideration would be required to ensure on the ground implementation of planning objectives, including the proper implementation of stipulations, lease notices and Best Management Practices (BMPs) through the Application for Permit to Drill (APD) process.

The BLM received nominations for eight subject parcels to be leased for oil and gas development (see Appendix A, November 2012 Preliminary Oil and Gas Lease Sale List; Appendix B, Map of Parcels). After an initial review two parcels (UT0512-002 and UT0512-006) were recommended to be deferred from the lease sale due to cultural resources that could be affected. This EA has been prepared to disclose and analyze the environmental consequences of the sale of six parcels during the November 2012 Oil and Gas Lease Sale. The surface and mineral rights for these parcels are owned by the federal government and administered by the RFO (see Appendix B).

There are portions of three parcels that would not be offered at the oral auction for competitive bidding. They include portions of parcels UT0512-001 (lease UTU89242), UT0512-003 (lease UTU89243), and UT0512-004 (lease UTU89244). As detailed in Section 5.3.1. and Appendix A, the parcel legal descriptions have been modified to exclude an applicable right-of-way (ROW). The portions of a railroad or ditches and canals ROW would be offered in accordance with the Rights-of-Way Leasing Act of May 21, 1930 and 43 CFR 3109.1-1. The area under the right-of-way is owned by those entities described in the respective ROWs. Title 43 CFR 3109.1-3 states that after the BLM has considered the application of the lease (through this EA), the adjoining land owner or lessee shall be allowed reasonable time, as provided in the notice, to submit a bid for the amount or compensatory royalty, the owner or lessee shall pay for the extraction of the oil and gas underlying the right-of-way through wells on adjoining lands. The owner of the right-of-way shall be given the same time period to submit a bid for the sale. The BLM will award the lease to the owner of the right-of-way or a contract for the payment of compensatory royalty by the owner or lessee of the adjoining lands shall be made to the bidder whose offer is determined, by the authorized officer to be the best advantage of the United States, considering the amount of royalty to be received and the better development under the respective means of production and operation (43 CFR 3109.1-4). The term of these leases shall be for no more than 20 years instead of the regular lease which is 10 years unless oil or gas is produced in paying quantities.

1.3 Purpose and Need of the Proposed Action

The parcels proposed for leasing were nominated by the public. The need for the sale is to respond to the public's nomination requests. Offering parcels for competitive oil and gas leasing

² The ENBB is a BLM environmental information internet site and can be accessed online at: <https://www.blm.gov/ut/enbb/index.php>

provides for the orderly development of fluid mineral resources under BLM's jurisdiction in a manner consistent with multiple use management and environmental consideration for the resources that may be present.

The purpose of the sale is to ensure that adequate provisions are included in the lease stipulations to protect public health and safety and assure full compliance with the objectives of NEPA and other federal environmental laws and regulations designed to protect the environment and mandating multiple use of public lands. The sale of oil and gas leases is needed to meet the growing energy needs of the United States public. The BLM is required by law to review areas that have been nominated; additionally there has been ongoing interest in oil and gas exploration in the RFO area in recent years. Oil and gas leasing is a principal use of the public lands as identified in Section 102(a)(12), 103(1) of the Federal Land Policy and Management Act of 1976 (FLPMA), and it is conducted to meet requirements of the Mineral Leasing Act of 1920, as amended, the Mining and Minerals Policy Act of 1970, and the Federal Onshore Oil and Gas Leasing Reform Act of 1987 (Reform Act). Leases would be issued pursuant to 43 CFR subpart 3100.

1.4 Conformance with BLM Land Use Plan

The alternatives described below are in conformance with RFO ROD/RMP, as maintained (BLM, 2008) because they are specifically provided for in the planning decision. They conform to the following Land Use Plan (LUP) decisions (RMP Table 19 pages 132-133):

MIN-1. Issue oil and gas leases and allow for oil and gas exploration and development.

MIN-10. Area closed to leasing: 447,300 acres

MIN-11. Manage fluid mineral leases as shown on Map 23:

- Areas open to leasing with standard lease terms: 608,700 acres
- Areas open to leasing subject to CSU and/or timing limitations: 917,500 acres
- Areas open to leasing subject to NSO: 154,500 acres

It is also consistent with RMP decisions and their corresponding goals and objectives related to the management of, including but not limited to, air quality, BLM natural areas, cultural resources, recreation, riparian, soils, water, vegetation, fish & wildlife, and Areas of Critical Environmental Concern (ACEC).

Standard lease terms provide for reasonable measures to minimize adverse impacts to specific resource values, land uses, or users (Standard Lease Terms are contained in Form 3100-11, Offer to Lease and Lease for Oil and Gas, U.S. Department of the Interior, BLM, June 1988 or later edition). Although once the lease has been issued, the lessee has the right to use as much of the leased land as necessary to explore for, drill for, extract, remove, and dispose of oil and gas deposits located under the leased lands, unless it is leased under a No Surface Occupancy (NSO) stipulation, operations must be conducted in a manner that avoids unnecessary or undue degradation of the environment and minimizes adverse impacts to the land, air, water, cultural, biological, and visual elements of the environment, as well as other land uses or users. Compliance with valid, nondiscretionary statutes (laws) is included in the standard lease terms and would apply to all lands and operations that are part of all of the alternatives.

Nondiscretionary actions include the BLM's requirements under federal environmental protection laws, such as the Clean Water Act, Clean Air Act, Endangered Species Act (ESA), National Historic Preservation Act (NHPA), and FLPMA, which are applicable to all actions on

federal lands even though they are not reflected in the oil and gas stipulations in the RMP and would be applied to all potential leases regardless of their category. Also included in all leases are the two mandatory stipulations for the statutory protection of cultural resources (BLM WO IM 2005-03, Cultural Resources and Tribal Consultation for Fluid Minerals Leasing) and threatened or endangered species (BLM WO IM-2002-174, Endangered Species Act Section 7 Consultation).

1.5 Relationship to Statutes, Regulations, or Other Plans

The proposed action is consistent with federal environmental laws and regulations, Executive Orders, and Department of Interior and the BLM policies and is in compliance, to the maximum extent possible, with state laws and local and county ordinances and plans to the maximum extent possible, including the following:

- Title V of the Federal Land Policy and Management Act of October 21, 1976 (90 Stat. 2776, 43 U.S.C. 1761) as amended and the regulations issued there under at 43 Code of Federal Regulations (CFR), part 2800
- Taylor Grazing Act of 1934 as amended
- Utah Standards and Guidelines for Rangeland Health (1997)
- Section 106 of the National Historic Preservation Act of 1966, as amended and associated regulations at 36 CFR Part 800
- Bald and Golden Eagle Protection Act of 1962
- Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.), as amended
- BLM Manual 6840- Special Status Species Management
- Migratory Bird Treaty Act
- Utah Partners in Flight Avian Conservation Strategy Version 2.0
- Birds of Conservation Concern 2002
- Executive Order 13186: Responsibilities of Federal Agencies to Protect Migratory Birds
- MOU between the USDI BLM and USFWS to Promote the Conservation and Management of Migratory Birds (4/2010)
- Utah Supplemental Planning Guidance: Raptor Best Management Practices (BLM UTSO IM 2006-096)
- Oil and Gas Leasing Reform – Land Use Planning and Lease Parcel Reviews (BLM WO IM 2010-117)
- UTSO IM2010-055 - Protection of Ground Water Associated with Oil and Gas Leasing, Exploration and Development
- Determining Conformity of Federal Actions to State or Federal Implementation Plans (40 CFR Part 93 Subpart E)
- MOU Among the USDA, USDI and EPA Regarding Air Quality Analysis and Mitigation for Federal Oil and Gas Decisions Through the NEPA Process (2011)
- Richfield Field Office Visual Resource Inventory (2011)

These documents, and their associated analysis, are hereby incorporated by reference, based on their use and consideration by various authors of this document. The attached Interdisciplinary Team Checklist, Appendix C, was also developed after consideration of these documents and their contents. Each of these documents is available for review upon request from the RFO. Utah's Standards for Rangeland Health address upland soils, riparian/wetlands, desired and

native species and water quality. These resources are either analyzed later in this document or, if not impacted, are also listed in Appendix C.

1.6 Identification of Issues

The proposed action was reviewed by an interdisciplinary parcel review (IDPR) team composed of resource specialists from the RFO. This team identified resources in the parcel areas which might be affected and considered potential impacts using current office records and geographic information system (GIS) data, and site visits. The UTSO specialists for air quality, wildlife, cultural resources, special designations, visual resources and solid minerals reviewed the proposal.

On August 5, 2011, the UTSO sent letters to the National Park Service (NPS), United States Fish and Wildlife Service (USFWS), United States Forest Service (USFS) and the State of Utah's Public Lands Policy Coordination Office (PLPCO), Utah Division of Wildlife Resources (UDWR) and the State Institutional Trust Lands Administration (SITLA) to notify them of the pending lease sale, solicit comments and concerns on the preliminary parcel list and invite them to participate in site visits. The IDPR team conducted site visits to validate existing data and gather new information in order to make an informed leasing recommendation on August 30, 2011 and March 29, 2012. None of the other agencies participated in the site visits with the RFO IDPR team. The results of the IDPR team review are contained in the Interdisciplinary Team Checklist, Appendix C.

Public notification was initiated by entering the project information on the ENBB on November 21, 2011. The EA and unsigned FONSI will be posted for public review and comment from June 22, 2012 through July 23, 2012. Additional information for the public is maintained on the Utah BLM Oil and Gas Leasing Webpage. Additional information on public participation is available in Section 5.3.

1.7 Summary

This chapter has presented the purpose and need of the proposed project, as well as resources that could be affected by the implementation of the proposed project. In order to meet the purpose and need of the proposed project in a way that resolves the issues, the BLM has considered and/or developed a range of alternatives. These alternatives are presented in Chapter 2. The affected environment will be described in Chapter 3 for the issues analyzed. The potential environmental impacts or consequences resulting from the implementation of each alternative considered in detail are analyzed in Chapter 4 for each of the identified issues.

2.0 DESCRIPTION OF ALTERNATIVES, INCLUDING THE PROPOSED ACTION

2.1 Introduction

This environmental assessment focuses on the Proposed Action and No Action alternatives. Other alternatives were not considered in detail because the issues identified during scoping did not indicate a need for additional alternatives or mitigation beyond those contained in the Proposed Action. The No Action alternative is considered and analyzed to provide a baseline for comparison of the impacts of the Proposed Action.

2.2 Alternative A – Proposed Action

Six parcels within the jurisdiction of the RFO have been proposed for sale in the November 2012 Oil and Gas Lease Sale to be held at the Utah BLM State Office. The nominated parcels would be offered with additional resource protection measures consistent with the RFO RMP (BLM, 2008). Legal descriptions of each parcel can be found in Appendix A, and a map of the nominated parcels can be found in Appendix B. All of the acreage proposed to be leased has been identified as being either open to leasing subject to standard lease terms, or open to leasing subject to minor constraints such as seasonal restrictions in the RFO RMP (RMP; see Map 23).

Leasing is an administrative action that affects economic conditions but does not directly cause environmental consequences. However, leasing is considered to be an irretrievable commitment of resources because the BLM generally cannot deny all surface use of a lease unless the lease is issued with a NSO stipulation. Potential oil and gas exploration and production activities, committed to in a lease sale, could impact other resources and uses in the planning area. Direct, indirect, or cumulative effects to resources and uses could result from as yet undetermined and uncertain future levels of lease exploration or development.

Although at this time it is unknown when, where, or if future well sites or roads might be proposed on any leased parcel, should a lease be issued, site specific analysis of individual wells or roads would occur when a lease holder submits an Application for Permit to Drill (APD). For the purposes of this analysis, the BLM assumed that one well pad with access road would be constructed on each lease subject to the terms, conditions, and stipulations of the lease. This would imply that over the next 10 years (the life of a lease that is not held by production) 6 locations could be drilled, with the potential surface disturbance of approximately 72 acres (assuming approximately 12 acres per drill pad and access road). These figures are estimated in the Reasonably Foreseeable Development Scenario (Appendix 12 of the RMP). In general, activities are anticipated to take place as described in the following sections.

Standard lease terms would be attached to all issued leases. These terms provide for reasonable measures to minimize adverse impacts to specific resource values, land uses, or users (Standard Lease Terms are contained in Form 3100-11, Offer to Lease and Lease for Oil and Gas, U.S. Department of the Interior, BLM, June 1988 or later edition). Once the lease has been issued, the lessee has the right to use as much of the leased land as necessary to explore for, drill for, extract, remove, and dispose of oil and gas deposits located under the leased lands subject to lease stipulations, however, operations must be conducted in a manner that avoids unnecessary or undue degradation of the environment and minimizes adverse impacts to the land, air, water, cultural, biological, and visual elements of the environment, as well as other land uses or users.

Compliance with valid, nondiscretionary statutes (laws) is included in the standard lease terms and would apply to all lands and operations that are part of all of the alternatives.

Nondiscretionary actions include the BLM's requirements under federal environmental protection laws, such as the Clean Water Act, Clean Air Act, Endangered Species Act (ESA), National Historic Preservation Act (NHPA), and Federal Land Policy and Management Act (FLPMA), which are applicable to all actions on federal lands even though they are not reflected in the oil and gas stipulations in the RMP and would be applied to all potential leases regardless of their category. Also included in all leases are the two mandatory stipulations for the statutory protection of cultural resources (BLM WO IM-2005-03, Cultural Resources and Tribal Consultation for Fluid Minerals Leasing) and threatened or endangered species (BLM WO IM-2002-174, Endangered Species Act Section 7 Consultation).

2.2.1 Well Pad and Road Construction

Equipment for well pad construction would consist of dozers, scrapers, and graders. All well pads would be reclaimed. Topsoil from each well pad would be stripped to a minimum depth of six inches and stockpiled for future reclamation. Interim reclamation of the pad would occur if the well produces commercial quantities of oil or gas. Interim reclamation involves a reduction of the drill pad to a size that accommodates the functions of a producing well. If the well is not productive final reclamation of the pad and constructed road would begin. The topsoil would be spread over the interim reclamation area, seeded, left in place for the life of the well, and then used during the final reclamation process. Disturbance for each well pad would be estimated at an area of approximately 4 acres of land, including topsoil piles. Disturbed land would be seeded with a mixture (certified weed free) and rate as recommended or required by the BLM.

Depending on the locations of the proposed wells, it is anticipated that some new or upgraded access roads would be required to access well pads and maintain production facilities. Any new roads constructed for the purposes of oil and gas development would be utilized year-round for maintenance of the proposed wells and other facilities, and for the transportation of fluids and/or equipment, and would remain open to other land users. Construction of new roads or upgrades to existing roads would require a 12-24 foot travelway width and would be constructed of native material. It is not possible to determine the distance of road that would be required because the location of the wells would not be known until the APD stage. However, for purposes of analyses it is assumed that disturbance from access roads would be approximately 8 acres (2 miles of road at 4 acres per mile) per well site.

2.2.2 Production Operations

If wells were to go into production, facilities would be located at the well pad and typically include a well head, a dehydrator/separator unit, and storage tanks for produced fluids. The production facility would typically consist of two storage tanks, a truck load-out, separator, and dehydrator facilities. Construction of the production facility would be located on the well pad and not result in any additional surface disturbance.

All permanent surface structures would be painted a flat, non-reflective color specified by the BLM in order to blend with the colors of the surrounding natural environment. Facilities that are required to comply with the Occupational Safety and Health Act (OSHA) would be excluded from painting color requirements. All surface facilities would be painted immediately after installation and under the direction and approval of the BLM.

All operations would be conducted following the “Gold Book”, *Surface Operating Standards for Oil and Gas Exploration and Development*. The Gold Book was developed to assist operators by providing information on the requirements for conducting environmentally responsible oil and gas operations on federal lands. The Gold Book provides operators with a combination of guidance and standards for ensuring compliance with agency policies and operating requirements, such as those found at 43 CFR 3000 and 36 CFR 228 Subpart E; Onshore Oil and Gas Orders (Onshore Orders); and Notices to Lessees. Included in the Gold Book are environmental BMPs; these measures are designed to provide for safe and efficient operations while minimizing undesirable impacts to the environment.

If oil is produced, the oil would be stored on location in tanks and transported by truck to a refinery. The volume of tanker truck traffic for oil production would be dependent upon production of the wells.

2.2.3 Produced Water Handling

Water is often associated with either produced oil or natural gas. Water is separated out of the production stream and can be temporarily stored in the reserve pit for 90 days. Permanent disposal options include discharge to evaporation pits or underground injection. Handling of produced water is addressed in Onshore Oil and Gas Order No. 7.

2.2.4 Maintenance Operations

Traffic volumes during production would be dependent upon whether the wells produced natural gas and/or oil, and for the latter, the volume of oil produced. Well maintenance operations may include periodic use of work-over rigs and heavy trucks for hauling equipment to the producing well, and would include inspections of the well by a pumper on a regular basis or by remote sensing. The road and the well pad would be maintained for reasonable access and working conditions. Portions of the well pad not needed for production of the proposed well, including the reserve pit, would be re-contoured and reclaimed, as an interim reclamation of the site.

2.2.5 Plugging and Abandonment

If the wells do not produce economic quantities of oil or gas, or when it is no longer commercially productive, the well would be plugged and abandoned. The wells would be plugged and abandoned following procedures approved by a BLM Petroleum Engineer, which would include requiring cement plugs at strategic positions in the well bore. All fluids in the reserve pit would be allowed to dry prior to reclamation work. After fluids have evaporated from the reserve pit, sub-soil would be backfilled and compacted within 90 days. If the fluids within the reserve pit have not evaporated within 90 days (weather permitting or within one evaporation cycle, i.e. one summer), the fluid would be pumped from the pit and disposed of in accordance with applicable regulations. The well pad would be re-contoured, and topsoil would be replaced, scarified, and seeded within 180 days of the plugging the well.

2.3 Alternative B – No Action

Under the No Action alternative none of the nominated parcels would be offered for sale.

2.4 Alternatives Considered but Eliminated from Further Analysis

A total of eight parcels were nominated and forwarded to the RFO for review. An alternative was considered that included leasing of all these parcels.

Parcel UT0512-002 contains important cultural resources. Locating a well near this site would not be in keeping with either the nature of the site there or the surrounding area which has not been examined for cultural remains. “The introduction of visual, atmospheric or audible elements that diminish the integrity of the property's significant historic features” is the criteria of adverse effect that is being used to support this conclusion (regulations of the National Historic Preservation Act at 36 CFR 800.5a (2) (v)). Parcel UT0512-006 contains a site which is considered to be eligible to the National Register (42SV2811). For these reasons it is recommended that parcels UT0512-002 and UT0512-006 be deferred. The Hopi Tribe responded back to the RFO requesting that parcels UT0512-002 and UT0512-006 be withdrawn from the lease sale. The Utah State Historic Preservation Officer (SHPO) has concurred with this deferral.

3.0 AFFECTED ENVIRONMENT

3.1 Introduction

This chapter presents the potentially affected existing environment (i.e., the physical, biological, social, and economic values and resources) of the impact area as identified in the Interdisciplinary Team Checklist found in Appendix C. This chapter provides the baseline for comparison of impacts/consequences described in Chapter 4. Only those aspects of the affected environment that are potentially impacted are described in detail (see Appendix C).

3.2 General Setting

The proposed action would result in the leasing for oil and gas development of six parcels within the RFO. All of the parcels are located on BLM administered lands. See Appendix A for legal descriptions and Appendix B for a map of the parcels. Additional information is also contained in the Interdisciplinary Team Checklist (Appendix C).

These parcels are located as a block ranging in size from 1,045 to 2,517 acres for a total of 10,634 acres. The parcels are located south of Joseph, in Sevier County, Utah. The landscape is composed of gently rolling hills and no major drainages or floodplains exist within the parcels. The area covered in a mixture of grass and shrubs. Some of the dominant vegetation species are: Wyoming sagebrush, shadscale, needle and thread grass, Indian ricegrass and greasewood. Areas that have been disturbed or burned from a wildfire are predominantly cheatgrass. High densities of roads crisscross the area. The area is utilized by grazing cattle for a portion of the year.

3.3 Resources/Issues Brought Forward for Analysis

3.3.1 Air Quality

Air quality is affected by various natural and anthropogenic factors. Industrial sources such as power plants, mines, and oil and gas extraction activities within Northern Utah contribute to local and regional air pollution. Urbanization and tourism create emissions that affect air quality over a wide area. Air pollutants generated by motor vehicles include tailpipe emissions and dust from travel over dry, unpaved road surfaces. Strong winds can generate substantial amounts of windblown dust.

Air pollution emissions are characterized as point, area, or mobile. Point sources are large, stationary facilities such as power plants and manufacturing facilities and are accounted for on a facility by facility basis. Area sources are smaller stationary sources and, due to their greater number, are accounted for by classes. Production emissions from an oil and gas well and dust from construction of a well pad would be considered area source emissions. Mobile sources consist of non-stationary sources such as cars and trucks. Mobile emissions are further divided into on-road and off-road sources. Engine exhaust from truck traffic to and from oil and gas locations would be considered on-road mobile emissions. Engine exhaust from drilling operations would be considered off road mobile emissions.

The Clean Air Act required the Environmental Protection Agency (EPA) to set National Ambient Air Quality Standards (NAAQS) for pollutants considered harmful to public health and the environment. The Utah Division of Air Quality (UDAQ) is responsible to ensure compliance with the NAAQS within the state of Utah. Table 1 shows NAAQS for the EPA designated criteria pollutants (EPA 2008).

Table 1: National Ambient Air Quality Standards				
Pollutant	Primary Standards		Secondary Standards	
	Level	Averaging Time	Level	Averaging Time
Carbon Monoxide (CO)	9 ppm (10 mg/m³)	8-hour ⁽¹⁾	None	
	35 ppm (40 mg/m³)	1-hour ⁽¹⁾		
Lead (Pb)	0.15 µg/m³ ⁽²⁾	Rolling 3-Month Average	Same as Primary	
	1.5 µg/m³	Quarterly Average	Same as Primary	
Nitrogen Dioxide (NOx)	0.053 ppm (100 µg/m³)	Annual (Arithmetic Mean)	Same as Primary	
	100 ppb	1-hour	Same as Primary	
Particulate Matter (PM ₁₀)	150 µg/m³	24-hour ⁽³⁾	Same as Primary	
Particulate Matter (PM _{2.5})	15.0 µg/m³	Annual ⁽⁴⁾ (Arithmetic Mean)	Same as Primary	
	35 µg/m³	24-hour ⁽⁵⁾	Same as Primary	
Ozone (O ₃)	0.075 ppm (2008 std)	8-hour ⁽⁶⁾	Same as Primary	
Sulfur Dioxide (SO ₂)	0.03 ppm	Annual (Arithmetic Mean)	0.5 ppm (1300 µg/m³)	3-hour ⁽¹⁾
	0.14 ppm	24-hour ⁽¹⁾		
	75 ppb	1-hour ⁽¹⁾	None	
<div>(1) Not to be exceeded more than once per year. (2) Final rule signed October 15, 2008. (3) Not to be exceeded more than once per year on average over 3 years. (4) To attain this standard, the 3-year average of the weighted annual mean PM2.5 concentrations from single or multiple community-oriented monitors must not exceed 15.0 µg/m3. (5) To attain this standard, the 3-year average of the 98th percentile of 24-hour concentrations at each population-oriented monitor within an area must not exceed 35 µg/m3 (effective December 17, 2006). (6) To attain this standard, the 3-year average of the fourth-highest daily maximum 8-hour average ozone concentrations measured at each monitor within an area over each year must not exceed 0.075 ppm. (effective May 27, 2008).</div>				

Air quality in the area of the parcels meets the NAAQS (State Department of Environmental Quality and the Division of Air Quality Standards (Utah Division of Air Quality 2011 Annual Report).³ The UDAQ 2011 annual report includes a 2008 emissions inventory (EI) (Table 2).

Table 2: Sevier County Emissions Inventory (2008) (Tons Per Year)					
PM ₁₀	1926.47	NO _x	1892.59	SO _x	118.78
PM _{2.5}	428.14	VOC	19678.44	CO	14528.92

Although not listed as a NAAQS criteria pollutant, volatile organic compounds (VOC) are also considered in this EA as they, along with NO_x, are precursors to the formation of ozone and are listed by UDAQ as a pollutant that, if the threshold is exceeded, would require an approval order.

³ Accessed on 2/17/2012 from <http://www.airquality.utah.gov/Public-Interest/annual-report/.pdf/2011%20Annual%20Report.pdf>

This EA addresses mobile off road engine exhaust emissions from drilling activities, venting and flaring emissions from completion and testing activities, emissions from ongoing production activities, and fugitive dust emissions, specifically emissions of total particulate matter of less than 10 micrometers (PM₁₀), from heavy construction operations. PM₁₀ emissions are converted from total suspended particulates by applying a conversion factor of 25%. PM_{2.5} is not specifically addressed as it is included as a component of PM₁₀. PM_{2.5} is converted from PM₁₀ by applying a conversion factor of 15%. This EA does not consider mobile on road emissions as they are dispersed, sporadic, temporary, and not likely to cause or contribute to an exceedance of the NAAQS.

3.3.2 Cultural Resources

A cultural resource records search was completed for lands involved with the subject lease sale parcels. The six parcels being offered for lease have had only a very few cultural resource inventories done either within them or near them. Within the last few years, cultural resource inventories associated with geophysical projects have recorded only seven archaeological sites within the eight parcels. Only site 42SV2811 (located in Parcel UT0512-006) is considered to be eligible to the National Register. In addition, Parcel UT0512-002 contains some unrecorded sites that could qualify for National Register listing.

Based on topography in and surrounding the nominated lease parcels, and known cultural summary information, it was determined that inventory considerations could be deferred until a specific development is proposed. A professional assessment of the lease parcels' potential for cultural resources eligible to the NRHP would be conducted during on-the-ground inventories of proposed developments prior to issuance of a permit for development. In all cases, the standard lease notice and the following stipulation identified in IM-2005-003 should be attached to the leases:

"This lease may be found to contain historic properties and/or resources protected under the National Historic Preservation Act (NHPA), American Indian Religious Freedom Act, Native American Graves Protection and Repatriation Act, E.O. 13007, or other statutes and executive orders. The BLM will not approve any ground disturbing activities that may affect any such properties or resources until it completes its obligations under applicable requirements of the NHPA and other authorities. The BLM may require modification to exploration or development proposals to protect such properties, or disapprove any activity that is likely to result in adverse effects that cannot be successfully avoided, minimized or mitigated."

Also, a portion of the Old Spanish Trail (OST) lies within parcels UT0512-003, UT0512-004, UT0512-005, and UT0512-007, an inventory of the OST was recently completed. The area covered by the parcels is part of the Long Valley analysis unit which is 9.3 miles long; 8.1 miles are located on BLM lands. This portion of the trail starts nearly two miles due east of Sevier and generally travels south to about two miles northeast of Marysville. The trail trace is visibly different at each of the three observation points in this survey. At observation point LV-1 (located atop a small hill adjacent to the trail trace), the trail trace is a two-track road. At observation point LV-5 (a grove of cedars and piñon pines near Monroe Mountain Road), the trail is evident only as a clearing in the trees and a faint swale. At observation point LV-7 (located along a bladed road overlooking the community of Marysville and associated development), the trail trace has been overlain by a bladed road. There are views of the surrounding valleys and mountains in most directions. To the west, there are views of settlement, including the I-70

corridor, in the valley near Sevier. A large transmission line and a few mining operations are visible from LV-7. A copy of the survey for the Long Valley analysis unit is included as Appendix E.

3.3.3 Native American Religious Concerns

The BLM's management of Native American Religious concerns is guided through its 8120 Manual: *Tribal Consultation Under Cultural Resources Authorities* and 8120 Handbook: *Guidelines for Conducting Tribal Consultation*. Further guidance for consideration of fluid minerals leasing is contained in WO IM 2005-003: Cultural Resources, Tribal Consultation, and Fluid Mineral Leasing. The 2005 memorandum notes oil and gas leasing is considered an undertaking as defined in the National Historic Preservation Act. Generally areas of concern to Native Americans are referred to as "Traditional Cultural Properties" (TCPs) which are defined as cultural properties eligible for the National Register because of its association with cultural practices or beliefs that (a) are rooted in that community's history and (b) are important in maintaining the continuing cultural identity of the community.

Letters containing notification of this lease sale and the results of our cultural resources records search were sent to the following Tribes on November 17, 2011: Paiute Indian Tribe of Utah, Ute Indian Tribe, Hopi Tribe, Navajo Nation, Utah Navajo Commission, Southern Ute Tribe, Ute Mountain Ute, White Mesa Ute, San Juan Southern Paiute, Kaibab Paiute Tribe, Moapa Band of Paiute Indians, the Northwest Band of Shoshone and the Fallon Paiute-Shoshone Tribe.

3.3.4 Soils/Watershed

Soils within the project area are included in the Hiko Peak soils series, associated with cobbly loam rangeland status. The soils associated with the Hiko Peak series consist of very deep, well drained soils that formed in alluvium and colluvium areas from basic igneous rocks, limestone and quartzite. Hiko Peak soils are on alluvial fans, fan remnants, and hills having slopes from 1 to 60 percent. These soils are well drained with low to high surface runoff and moderate to moderately rapid permeability. Predicted erosion rates for the project area are less than 1 ton of sediment per acre per year.

The project area occurs within the middle segment of the Sevier River Watershed (specifically the Rocky Ford Reservoir to the Annabelle Diversion [HUC identifier 16030003]. Drainages within the immediate project area are ephemeral in nature. The Utah Department of Environmental Quality's Division of Water Quality listed this segment of the watershed as impaired under the parameters of concern set out in Section 303(d) of the Clean Water Act and the U.S. Environmental Protection Agency's Water Quality Planning and Management Regulations (40 CFR Part 130). The Rocky Ford Reservoir to the Annabelle Diversion, which includes the project area, has been determined to be impaired due to the exceedence of the numeric standards set for total dissolved solids (1200 milligrams per liter) for agriculture, its assigned beneficial use.

3.3.5 Socio-Economics

Sevier County has a rural, agricultural-based economy. The Richfield Area Chamber of Commerce shows Sevier County's population is 18,842 (based on the 2000 census). The U.S. Census Bureau projected a 3.3 percent increase in population by mid-2004, which would bring the current population to about 19,500. The population is mostly dispersed into small communities. Richfield, the county seat, has a population of 6,847 (2000 census) and is the largest town in the county. The county's economy is currently based on livestock, manufacturing, and trade.

4.0 ENVIRONMENTAL IMPACTS

4.1 Introduction

This chapter discusses the environmental consequences of implementing the alternatives described in Chapter 2. Under NEPA, actions with the potential to affect the quality of the human environment must be disclosed and analyzed in terms of direct and indirect effects—whether beneficial or adverse and short or long term—as well as cumulative effects. Direct effects are caused by an action and occur at the same time and place as the action. Indirect effects are caused by an action but occur later or farther away from the resource. Beneficial effects are those that involve a positive change in the condition or appearance of a resource or a change that moves the resource toward a desired condition. Adverse effects involve a change that moves the resource away from a desired condition or detracts from its appearance or condition. Cumulative effects are the effects on the environment that result from the incremental effect of the action when added to other past, present, and reasonably foreseeable future actions.

The No Action alternative (offer none of the nominated parcels for sale), serves as a baseline against which to evaluate the environmental consequences of the Proposed Action alternative (defer two of the nominated parcels and offer six of the parcels for sale with additional resource protective measures). For each alternative, the environmental effects are analyzed for the resources that were carried forward for analysis in Chapter 3.

4.2 Direct and Indirect Impacts

4.2.1 Alternative A – Proposed Action

This section analyzes the impacts of the proposed action to those potentially impacted resources described in the Affected Environment (Chapter 3).

4.2.1.1 Air Quality

The act of leasing would not result in changes to air quality. However, should the leases be issued, development of those leases could impact air quality conditions. It is not possible to accurately estimate potential air quality impacts by computer modeling from the project due to the variation in emission control technologies as well as construction, drilling, and production technologies applicable to oil versus gas production and utilized by various operators, so this discussion remains qualitative.

Prior to authorizing specific proposed projects on the subject lease parcels quantitative computer modeling using project specific emission factors and planned development parameters (including specific emission source locations) may be conducted to adequately analyze direct and indirect potential air quality impacts. In conducting subsequent project specific analysis BLM will follow the policy and procedures of the National Interagency MOU Regarding Air Quality Analysis and Mitigation for Federal Oil and Gas Decisions through NEPA, and the FLAG 2010 air quality guidance document. Air quality dispersion modeling which may be required includes impact analysis for demonstrating compliance with the NAAQS, plus analysis of impacts to Air Quality Related Values (i.e. deposition, visibility), particularly as they might affect regional Class 1 areas (national parks and wilderness areas).

An oil or gas well, including the act of drilling, is considered to be a minor source under the Clean Air Act. Minor sources are not controlled by regulatory agencies responsible for implementing the Clean Air Act. In addition, control technology is not required by regulatory agencies at this point, since the majority of the parcels occur in NAAQS attainment areas. Different emission sources would result from the two site specific lease development phases: well development and well production.

Well development includes emissions from earth-moving equipment, vehicle traffic, drilling, and completion activities. NO_x, SO₂, and CO would be emitted from vehicle tailpipes. Fugitive dust concentrations would increase with additional vehicle traffic on unpaved roads and from wind erosion in areas of soil disturbance. Drill rig and fracturing engine operations would result mainly in NO_x and CO emissions, with lesser amounts of SO₂. These temporary emissions would be short-term during the drilling and completion times.

During well production there are continuous emissions from separators, condensate storage tanks, and daily tailpipe and fugitive dust emissions from operations traffic. During the operational phase of the Proposed Action, NO_x, CO, VOC, and HAP emissions would result from the long-term operation of condensate storage tank vents, and well pad separators. Additionally, road dust (PM₁₀ and PM_{2.5}) would be produced by vehicles servicing the wells.

Project emissions of ozone precursors, whether generated by construction and drilling operations, or by production operations, would be dispersed and/ or diluted to the extent where any local ozone impacts from the Proposed Action would be indistinguishable from background or cumulative conditions. The primary sources of HAPs are from oil storage tanks and smaller amounts from other production equipment. Small amounts of HAPs are emitted by construction equipment. However, these emissions are estimated to be less than 1 ton per year. Based on the negligible amount of project-specific emissions, the Proposed Action is not likely to violate, or otherwise contribute to any violation of any applicable air quality standard, and may only contribute a small amount to any projected future potential exceedance of any applicable air quality standards.

The construction, drilling, completion, testing, and production of an oil and gas well could result in various emissions that affect air quality. Construction activities result in emissions of PM₁₀. Well drilling activities result in engine exhaust emissions of NO_x, CO, and VOC. Completion and testing of the well result in emissions of VOC, NO_x, and CO. Ongoing production results in the emission of NO_x, CO, VOC, and PM₁₀.

Due to the very small level of anticipated development, an emissions inventory (EI) has not been conducted for this lease sale. A typical oil and gas well EI is estimated for the purpose of this analysis and is based on the following assumptions:

- Each oil and gas well would cause 12 acres of surface disturbance. This acreage includes access.
- Construction activity for each well is assumed to be 10 days. It is further assumed that, based on the acreage disturbed, 4.5 days would be spent in well pad construction and 5.5 days would be spent in road and pipeline construction.
- Control efficiency of 25% for dust suppression would be achieved as a result of compliance with Utah Air Quality regulation R307-205.
- Post construction particulate matter (dust) emissions are likely to occur on a short term basis due to loss of vegetation within the construction and staging areas. Assuming

appropriate interim reclamation, these emissions are likely to be minimal to negligible and will not be considered in this EA.

- Drilling operations would require approximately 60 days.
- Completions and testing operations would require 3 days.
- Off road mobile exhaust emissions from heavy equipment during construction activities and on road mobile emissions would not be considered as they are dispersed, sporadic, temporary, and not likely to cause or contribute to exceedance of the NAAQS.

If exploration occurs, short-term impacts would be stabilized or managed rapidly (within two to five years), and long-term impacts are those that would substantially remain for more than five years. An air quality best management practice (BMP) which discusses the amounts of NO_x emission per horse-power hour based on internal combustion engine size, would be attached to all parcels. Stipulation UT-S-101, Air Quality, would consist of the following provisions:

- All new and replacement internal combustion gas field engines of less than or equal to 300 design-rated horsepower must not emit more than 2 grams of NO_x per horsepower-hour. This requirement does not apply to gas field engines of less than or equal to 40 design-rated horsepower.
- All new and replacement internal combustion gas field engines of greater than 300 design rated horsepower must not emit more than 1.0 gram of NO_x per horsepower-hour.

Emission factors for activities of the proposed action were based on information contained in the EPA's Emission Factors & AP 42, Volume I, Fifth Edition (EPA.1995), available at:

<http://www.epa.gov/ttn/chief/ap42/index.html>. The production emissions from oil storage tanks was estimated based on the emission factor contained in the Colorado Department of Public Health and Environment PS Memo 05-01, Oil & Gas Atmospheric Condensate Storage Tank Batteries Regulatory Definitions and Permitting Guidance (CDPHE 2009), available at: <http://www.cdphe.state.co.us/ap/down/ps05-01.pdf>.

Table 3: Emissions Estimate

	Construction Emissions (Tons)	Drilling Emissions (Tons)			Completions Emissions (Tons)				Ongoing Production Emissions (Tons/year)			
	PM ₁₀	NO _x	CO	VOC	VOC	NO _x	CO	PM ₁₀	NO _x	CO	VOC	PM ₁₀
Typical Well	0.34	13.31	1.83	0.23	0.85	0.07	0.07	0.00	0.01	0.01	6.44	0.00000
Sub Total	0.34	13.31	1.83	0.23	0.85	0.07	0.07	0.00	0.01	0.01	6.44	0.00000
					PM ₁₀	NO _x	CO	VOC				
Activity Emissions (Total emissions for drilling and completion the well)					0.34	13.37	1.89	1.08	Tons			
Production Emissions (Ongoing annual emissions for the well)					0.00000	0.01	0.01	6.44	tpy			

Based on the emissions estimates contained in Table 3, and considering the location of the proposed leasing relative to population centers and Class 1 areas, substantial air resource impacts are not anticipated as a result of this leasing action, and no further analysis or modeling is warranted. Emissions resulting from the lease sale are not likely to result in major impacts to air quality nor are they likely to cause a violation of the NAAQS.

Additional air quality control measures may be warranted and imposed at the APD stage. These control measures are dependent on future regional modeling studies, other analysis or changes in regulatory standards. As such, a lease notice would be appropriate to inform an operator or the general public that additional air quality control measures would be pursued. Lease notices UT-LN-99 (Regional Ozone Formation Controls) and UT-LN-102 (Air Quality Analysis) would be attached to all lease parcels. To address oil and gas development emissions may have on regional ozone formation, the following Best Management Practices (BMPs) would be required through a lease notice (UT-LN-99, Regional Ozone Formation Controls) for any development projects related to this lease sale:

- Tier II or better drilling rig engines
- Stationary internal combustion engine standard of 2g NOx/bhp-hr for engines <300HP and 1g NOx/bhp-hr for engines >300HP
- Low bleed or no bleed pneumatic pump valves
- Dehydrator VOC emission controls to +95% efficiency
- Tank VOC emission controls to +95% efficiency

4.2.1.2 Cultural Resources

The issuance of leases would not directly impact cultural resources on the nominated parcels. Based on past surveys, some cultural sites are present. Project-specific impacts relating to future authorizations cannot be analyzed until an exploration or development application is received. At that time site specific surveys would be completed.

If actual surface-disturbing activities result from the lease, site specific cultural resource inventories will be conducted and appropriate Section 106 consultation will be done. Given the low site densities on these parcels, it is likely that wells could be located there without disturbing any archaeological or historic sites that may be present. On parcel UT0512-002 the situation is different because of the important nature of the pictographs. Locating a well near this site would not be in keeping with either the nature of the site there or the surrounding area which has not been examined for cultural remains. “The introduction of visual, atmospheric or audible elements that diminish the integrity of the property's significant historic features” is the criteria of adverse effect that is being used to support this conclusion (regulations of the National Historic Preservation Act at 36 CFR 800.5a (2) (v)). Parcel UT0512-006 contains a site which is considered to be eligible to the National Register (42SV2811). For these reasons it is recommended that parcels UT0512-002 and UT0512-006 be deferred. The Hopi Tribe responded back to the Field Office requesting that parcels UT0512-002 and UT0512-006 be withdrawn from the lease sale. Utah State Historic Preservation Officer (SHIPO) has concurred with these determinations. Also, a letter (December 28, 2011) was received back from the Navajo Nation concluding that the project will have no impact on Navajo traditional cultural resources.

In regards to the Old Spanish Trail, the survey for the Long Valley analysis unit determined that the historic setting has diminished historic integrity due to views to a large transmission line, mining operations (both historic and current), range improvements (fences, livestock ponds and

troughs), and roads. Currently the BLM is developing management direction and goals specific to historic trails. Lease Notice UT-LN-65 should be attached to parcels UT0512-003, UT0512-004, UT0512-005, and UT0512-007 to inform perspective lessees of the presence of the OST and measures that may have to be implemented prior to oil and gas exploration and development.

4.2.1.3 Native American Religious Concerns

The issuance of leases would not directly impact Native American Religious Concerns. Project-specific impacts relating to future authorizations cannot be analyzed until an exploration or development application is received. If any concerns are raised by the tribes, those concerns would be addressed as necessary. Additional consultation would be conducted should site-specific use authorization requests be received. As the proposal becomes more site-specific, tribes would again be notified and given further opportunity for comment. A letter (December 28, 2011) was received back from the Navajo Nation concluding that the project will have no impact on Navajo traditional cultural resources. The Hopi Tribe responded back to the Field Office requesting that parcels 002 and 006 be withdrawn from the lease sale.

4.2.1.4 Soils/Watershed

The Proposed Action would result in the disturbance of approximately 72 acres of soil due to construction of one well pad and access road improvement and new road construction per potential lease development.

Direct impacts to soils would include soil exposure due to vegetation removal, mixing of soil horizons, loss of topsoil productivity, soil compaction, and increased susceptibility to wind and water erosion. These impacts may consequently result in increased erosion, runoff, and sedimentation. Most erosion would occur on steeper cut and fill slopes and in areas where runoff is concentrated, such as within roadway ditches. However, these impacts would be reduced by rehabilitating disturbed lands. Cut and fill, stockpiles, and other disturbances would be seeded for re-growth of vegetation to stabilize slopes and to reduce erosion. If the well pad is needed for production, the well pad could be reduced in size, and this interim reclamation would restore part of the disturbed lands to natural conditions to the extent practicable with ongoing, oil and gas operations.

Soil and vegetation would be stripped and alluvial/colluvial material and bedrock to a certain degree would be excavated in the part of the project that involves construction. The loosening of earthen material and the removal of soil and vegetation could contribute sediment and total dissolved solids to the watershed. However, the increase in sediment load or total dissolved solids is anticipated to be relatively minor and localized. Most sediment within the project area would be transported by surface runoff from precipitation, which includes occasional winter snow falls and summer storms. Snow fall is relatively light at an elevation of 6,000 feet in this setting. Thunderstorms can produce runoff, but these storms are infrequent. Sediment contributed to the associated local drainages is anticipated to be relatively low, since there are no well-developed channels from the potential lease parcels leading to the Sevier River. Potential impacts would be mitigated by requiring stabilization of cut and fill slopes, interim reclamation if the well is productive, and final reclamation when the project is terminated.

The potential for increased erosion and sedimentation would be greatest in the short-term immediately after construction, when the disturbed soils are loose and would decline over time in areas where reclamation is implemented, and in other areas as natural stabilization occurs

through particle aggregation, soil structure development and armoring. The potential for erosion and short-term surface runoff would be decreased through design features described in a subsequent Surface Use Plan prepared for the Application for Permit to Drill (APD) and through application of Stipulation UT-S-102.

4.2.1.5 Socio-Economics

The social and economic environments of Sevier County would be positively affected by the proposed project. Exploratory drilling of oil and gas in the project area would contribute to the local economy by providing several benefits: short-term employment opportunities for construction, drilling and completion; monies to local contractors; and revenues recycled into the area's local economy. Additional revenues would be generated in the form of sales taxes and income taxes. Local workers would potentially be used in much of the project work, and they would likely spend much of their income in local economies, thus producing a "multiplier effect" that could be at least 1.5 times the revenues generated from the proposed project.

The Proposed Action would add to the short-term opportunities for employment in Sevier County, especially for workers associated with the support of the oil and gas industry. The average cost to construct, drill and complete an individual well is approximately \$3,500,000.

If the proposed well is productive, long-term employment opportunities would likely be generated for at least one pumper and three tanker truck drivers. If the well is productive, income to the federal government, State of Utah and Sevier County would be generated in the form of royalties, sales taxes, income taxes, and property taxes for the producing well. Furthermore, if the well is productive, field development would likely be pursued by the applicant, thereby potentially resulting in additional short-term and long-term employment opportunities, royalties, sales taxes, income taxes, and property taxes.

If production is established from a well and/or additional wells, the development of oil and gas could lead to long-term impacts to the social structure of the communities, changes in the economic base, and an increased demand for local government services. These impacts could include increased revenues in the local economy, an increase in the tax base, change in the social structure of the local community, and increased demand for community services and strain on the infrastructure (schools, hospitals, law enforcement, fire protection, and other community needs). These possible social and economic changes are beyond the scope of this document and to make those projections would be speculative at best.

4.2.1.6 Design Features

Application of stipulations and lease notices (including those identified in Appendix A and C) to each of parcels on federal surface would be adequate for the leasing stage to disclose potential future restrictions and to facilitate the reduction of potential impacts upon receipt of a site specific APD.

4.2 Alternative B – No Action

This alternative (not to offer any of the nominated parcels for sale) may not meet the need for the proposed action.

Although drilling and production activities on federal land surfaces are restricted to leased parcels, oil and gas exploration may also be authorized on unleased public lands, on a case-by-case basis, pursuant to 43 CFR 3150.0-1. Accordingly, this alternative would not prevent direct,

indirect or cumulative environmental impacts relating to oil and gas exploration activities through denial of the proposed action. Additionally, this alternative would not prevent indirect impacts relating to rights of way authorizations to support oil and gas operations on adjacent leased lands.

4.2.2.1 Air Quality

The No Action alternative would prevent future potential impacts relating to lease operations. Although drilling and production activities on federal land surfaces are restricted to leased parcels, oil and gas exploration may also be authorized on unleased public lands, on a case-by-case basis, pursuant to 43 CFR 3150.0-1. Accordingly, this alternative would not prevent direct, indirect or cumulative environmental impacts relating to oil and gas exploration activities through denial of the proposed action. Additionally, this alternative would not prevent indirect impacts relating to rights of way authorizations to support oil and gas operations on adjacent leased parcels.

4.2.2.2 Cultural Resources

Existing cultural resources in the proposed area of operations would not be potentially impacted from the proposed action and would remain undisturbed.

4.2.2.3 Native American Religious Concerns

The No Action alternative would not result in potential impacts relating to development because the parcels would not be leased.

4.2.2.4 Soils/Watershed

Under the No Action alternative, soil disturbance, erosion and sediment yield would not occur within the immediate project area.

4.2.2.5 Socio-Economics

Under the No Action alternative, potential short-term beneficial impacts of increased employment and income and revenues generated from construction, drilling and completion of the wells would not be realized since this proposed wells would not be drilled. Not drilling the proposed wells would reduce the likelihood of finding oil and gas resources because potential mineral resources would not be developed.

4.3 Cumulative Impacts Analysis

A cumulative impact is defined in Council on Environmental Quality (CEQ) regulations (40 CFR §1508.7) as “the impact on the environment that results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions.” Cumulative impacts can result from individually minor but collectively major actions taking place over a period of time. Past and present actions and reasonably foreseeable future actions with the potential to contribute to cumulative effects are discussed below followed by an analysis of cumulative effects. All resource values addressed in Chapter 3 have been evaluated for cumulative effects. If, through the implementation of mitigation measures or project design features, no net effect to a particular resource results from an action, then no cumulative effects result.

Reasonably Foreseeable Action Scenario (RFAS)

The Cumulative Impact Analysis Area (CIAA) for air quality is Sevier County. Based on the relatively minor levels of emissions associated with this proposed development, and the application of these BMP's, it is unlikely emissions from any subsequent development of the proposed leases would contribute to regional ozone formation in the project area, nor is it likely to contribute or cause exceedences of any NAAQS.

Based on the relatively minor levels of emissions associated with this proposed development, and the application of BMPs and lease notices, it is unlikely emissions from any subsequent development of the proposed leases would contribute to regional ozone formation in the project area, nor is it likely to contribute or cause exceedences of any NAAQS.

A variety of activities, such as sightseeing, biking, camping, and hunting, have occurred and are likely to continue to occur near or within some or all of the nominated parcels; these activities likely result in negligible impacts to cultural resources and Native American religious concerns because of their dispersed nature. Other activities, such as farming, livestock grazing, vegetation projects, and wildland fire, have also occurred within some or all of the nominated parcels and are likely to occur in the future. These types of activities are likely to have a greater impact on resources in the project area because of their more concentrated nature. Because these activities are occurring within the nominated parcel boundaries, they have the potential to contribute to cumulative effects.

5.0 CONSULTATION AND COORDINATION

5.1 Introduction

Public and agency involvement has occurred as described in sections 5.2 and 5.3 below.

5.2 Persons, Groups, and Agencies Consulted

Name	Purpose & Authorities for Consultation or Coordination	Findings & Conclusions
U.S. Fish & Wildlife Service	Section 7 ESA	Formal consultation was completed as part of the RMP/ROD in the form of the Biological Opinion. A letter was sent to the FWS on August 5, 2011 which provided the preliminary list and notified them of the May 2012 lease sale. In a follow-up to the 8/5/11 letter, an email was sent to the USFWS transmitting the parcel list and GIS shapefiles. On October 18, 2011, a no effect determination was forwarded to the USFWS. Concurrence as received on October 25, 2011.
Utah State Historic Preservation Office	Section 106 NHPA	A consultation request letter was sent on December 27, 2011 with a determination of no historic properties affected. SHPO concurrence was received on January 6, 2012.
State of Utah's Public Lands Policy Coordination Office	Coordinated with as leasing program partner.	A letter was sent on August 5, 2011 which provided the preliminary list and notified them of the May 2012 lease sale. Coordination is ongoing.
Utah Division of Wildlife Resources	Agency with expertise.	In a follow-up to the PLPCO letter, 3 emails were sent to UDWR on 8/8/11 and 8/9/11 transmitting the parcel list, GIS shapefiles and map. Consultation is ongoing.
National Park Service, Salt Lake City Office	Coordinated with as leasing program partner.	A letter was sent on August 5, 2011 which provided the preliminary list and notified them of the May 2012 lease sale. An email was sent on 8/8/11, transmitting the parcel list with the GIS shapefiles. The NPS forwarded the information to their network on 8/11/11. The NPS expressed concerns with the parcels in proximity to the Old Spanish Trail and high potential segments (email 8/22/11). Coordination is ongoing.
U.S. Forest Service, Intermountain Region	Coordinated with as leasing program partner.	A letter was sent on August 5, 2011 which provided the preliminary list and notified them of the May 2012 lease sale. On August 24, 2011, the USFS responded stating that they had no comments because all of the parcels occurred outside of the National Forest System.
Utah School and Institutional Trust Lands Administration	Coordinated with as leasing program partner.	A letter was sent on August 5, 2011 which provided the preliminary list and notified them of the May 2012 lease sale. Coordination is ongoing.
Paiute Indian Tribe of Utah Ute Indian Tribe	American Indian Religious Freedom Act	Consultation request letters were sent November 17, 2011. A letter back from the Navajo Nation

Name	Purpose & Authorities for Consultation or Coordination	Findings & Conclusions
Hopi Tribe Navajo Nation Utah Navajo Commission Southern Ute Tribe Ute Mountain Ute White Mesa Ute San Juan Southern Paiute Kaibab Paiute Tribe Moapa Band of Paiute Indians Northwest Band of Shoshone Tribe Fallon Paiute-Shoshone Tribe.	(1978) NHPA	was received on February 13, 2012 concluding that the project would have no impact on Navajo traditional cultural resources. The Hopi Tribe responded back to the Field Office with a letter (November 22, 2011) requesting that parcels UT0512-002 and UT0512-006 be withdrawn from the lease sale. These parcels have been deferred (Section 1.6). Consultation is ongoing.
Sevier County Commissioners	Coordination	Proposed project was discussed at a County Commissioners meeting on January 17, 2012. Commissioners are in favor of leasing parcels.

5.3 Summary of Public Participation

In order to meet the intent of the CEQ regulations that require an “early and open process for determining the scope of issues to be addressed and for identifying significant issues related to a Proposed Action” (40 CFR 1501.7) several actions were taken to involve the public.

On November 21, 2011, the public was notified of the proposed action by posting on the Utah BLM ENBB (<https://www.blm.gov/ut/enbb>). The process used to involve the public also includes a 30-day public review and comment period for the EA and unsigned FONSI currently projected to be from June 22, 2012 to July 23, 2012. In addition, the EA and unsigned FONSI were posted on the BLM Utah’s Oil and Gas Lease Sale webpage (http://www.blm.gov/ut/st/en/prog/energy/oil_and_gas/oil_and_gas_lease.html).

The BLM also refers to the public involvement process utilized in developing the RFO ROD/RMP.

All the information related to this EA is maintained on the identified websites (ENBB and Oil and Gas Leasing).

5.3.1 Modifications Based on Public Comment and Internal Review

During the public comment period, BLM also completed an internal review and identified necessary corrections or clarifications to this EA. These modifications include:

1. Corrections to grammar, sentence structure, and formatting were made throughout the EA. In general, these changes were made without further clarification. Examples include: updates to the Table of Contents, changes in font size, changes in verb tense and style or insertion of footnotes. An August 2012 date was inserted into the header of each page to distinguish prior versions of the EA.
2. Section 1.2 (Background) was edited to identify which parcels contained existing right of ways and therefore would be offered in accordance with the Rights-of Way Act of May 21, 1931 and 43 CFR 3109.1-1.
3. Section 5.2 (Persons, Groups, and Agencies Consulted) was edited within Table 5-1 to update the findings and conclusions for the Utah Air Resources Technical Advisory Group. This group was not consulted because it is not required by the respective MOU.
4. Appendix A (Parcel List) was edited by the following actions:
 - UT0512-001: legal description was edited in sections 30 and 31 to exclude a railroad right of way. Acreage totals were adjusted accordingly.
 - UT0512-003: legal description was edited in section 27 to exclude a railroad right of way. Acreage totals were adjusted accordingly.
 - UT0512-004: legal description was edited in section 33 to exclude a railroad right of way. Section 35 contains two lots and their correct acreage was reflected in the overall acreage change.
 - Due to the above changes the combined total acreage for the lease sale was changed from 10,639 acres to 10,634 acres. This figure was changed in Sections 1.1 and 3.2.
5. Appendix C (Interdisciplinary Team Checklist) was signed by the NEPA coordinator and manager.

6. Appendix F (Comment Response Table) was deleted because the public did not comment on this EA.

5.3.2 Response to Public Comment

As stated in Section 5.3, BLM concluded a public comment period on the Unsigned FONSI and EA on July 23, 2012. Public comments were not submitted.

5.4 List of Preparers

Name ⁴	Title	Responsible for the Following Section(s) of this Document
Stan Andersen	Supervisory Natural Resource Specialist	Team Lead, Environmental Justice, and Socio-Economics
Leonard Herr	Physical Scientist	Air Quality, and Greenhouse Gas Emissions/Climate Change
Phil Zieg	Hydrologist	Water Resources/Water Quality/Water Rights
Noelle Glines-Bovio	Outdoor Recreation Specialist	ACEC's, BLM Natural Areas, Recreation, Visual Resources, Wild and Scenic Rivers, and Wilderness/WSA
Craig Harmon	Archeologist	Cultural Resources and Native American Religious Concerns
Brant Hallows	Soil Scientist	Floodplains, Farmlands (Prime or Unique), and Soils/Watershed
Larry Greenwood	Wildlife Biologist	Fish and Wildlife, Migratory Birds, Utah Sensitive Plant and Animal Species other than FWS Candidate or Listed Species, Vegetation, Wetlands/Riparian Zones, and Threatened, Endangered, or Candidate Animal Species, and Threatened, Endangered, or Candidate Plant Species
Bob Bate	Fuels Specialist	Fuels/Fire Management and Woodland/Forestry
John Reay	Geologist	Geology/Mineral Resources/Energy Production, and Paleontology
Nancy DeMille	Realty Specialist	Lands/Access
Burke Williams	Range Specialist	Invasive Species/Non-Native Species (Noxious Weeds), Livestock Grazing/Range, Rangeland Health Standards and Guidelines
Randy Peterson	Safety Coordinator	Wastes (Hazardous or Solid)
Chris Colton	Range Specialist	Wild Horse and Burros

⁴ Refer also to the Interdisciplinary Team Checklist (Appendix C).

6.0 REFERENCES, GLOSSARY AND APPENDICES

6.1 References Cited

BLM. 2008. Richfield Field Office Record of Decision and Approved Resource Management Plan. Richfield Field Office, Utah, October 2008.

Utah Division of Air Quality, 2011, Annual Report for the Year 2011, Salt Lake City, Utah, 38 pp.

US Department of Interior and US Department of Agriculture. 2007. Surface Operating Standards and Guidelines for Oil and Gas Exploration and Development. 84 pp.

Logan Simpson Design Inc. (2011), Richfield Field Office Visual Resource Inventory, Department of the Interior, Bureau of Land Management, Utah State Office, Salt Lake City, Utah.

6.2 List of Acronyms

ACEC	Areas of Critical Environmental Concern	LN	Lease Notice
APD	Application for Permit to Drill	LUP	Land Use Plan
BLM	Bureau of Land Management	NCLS	Notice of Competitive Lease Sale
BMP	Best Management Practice	NEPA	National Environmental Policy Act
BCR	Bird Conservation Region	NHPA	National Historic Preservation Act
CFR	Code of Federal Regulations	NRHP	National Register of Historic Places
CIA	Cumulative Impact Area	OSHA	Occupational Safety and Health Act
CWCS	Comprehensive Wildlife Conservation Strategy	RFAS	Reasonably Foreseeable Action Scenario
DR	Decision Record	RFD	Reasonably Foreseeable Development
EA	Environmental Assessment	RFO	Richfield Field Office
EIS	Environmental Impact Statement	ROD	Record of Decision
ENBB	Environmental Notification Bulletin Board	ROW	Right-of-Way
EPA	Environmental Protection Agency	SHPO	State Historic Preservation Office
ESA	Endangered Species Act	UDWR	Utah Division of Wildlife Resources
FEIS	Final Environmental Impact Statement	USFWS	United States Fish & Wildlife Service
FEMA	Federal Emergency Management Agency	USC	United States Code
FLPMA	Federal Land Policy and Management Act of 1976	USO	Utah State Office
FONSI	Finding of No Significant Impact	WO	Washington Office
IDPR	Interdisciplinary Parcel Review		
IM	Instruction Memorandum		

6.3 List of Appendices

- A. Preliminary Oil and Gas Lease Sale List with Stipulations and Lease Notices
- B. Map of Parcels
- C. Interdisciplinary Team Checklist

June 2012

November 2012 Oil and Gas Lease Sale

D. Deferred Parcel List

E. Old Spanish Trail Report (Long Valley Unit)

**APPENDIX A
OIL AND GAS LEASE SALE LIST
WITH STIPULATIONS AND LEASE NOTICES**

In addition to the Stipulations listed below, the direction provided in Washington Office Memorandums WO-IM-2005-003 (Cultural Resources Stipulation) and WO-IM-2002-174 (Endangered Species Act Stipulation) should be applied to all parcels.

UT0512-001

T. 25 S., R. 3 W., Salt Lake

Sec. 7: Lots 2-4, E2W2;

Sec. 18: Lots 1-4, W2E2, E2W2;

Sec. 19: Lots 1-4, NE, E2W2, W2SE;

Sec. 30: Lots 1-4, W2E2, E2NW, NESW, SESE excluding ROW U51909;

Sec. 31: Lots 1, 2, E2, SESW, Excluding ROW U51909.

2,239.38 Acres

Sevier County, Utah

Richfield Field Office

STIPULATIONS

UT-S-01: Air Quality

UT-S-102: Fragile Soils/ Slopes 30 percent or Greater

UT-S-233: Crucial Mule Deer and Elk Winter Habitat

NOTICES

UT-LN-40: Golden Eagle Habitat

UT-LN-45: Migratory Bird

UT-LN-49: Utah Sensitive Species

UT-LN-52: Noxious Weeds

UT-LN-99: Regional Ozone Formation Controls

UT-LN-102: Air Quality Analysis

UT0512-003

T. 25 S., R. 4 W., Salt Lake

Sec. 25

Sec. 26: All excluding RR ROW SL039639;

Sec. 27: S2SW, SE, S2NE excluding RR ROW SL039639.

1,595.10 Acres

Sevier County, Utah

Richfield Field Office

STIPULATIONS

UT-S-01: Air Quality

UT-S-102: Fragile Soils/ Slopes 30 percent or Greater

UT-S-233: Crucial Mule Deer and Elk Winter Habitat

NOTICES

UT-LN-40: Golden Eagle Habitat

UT-LN-45: Migratory Bird

UT-LN-49: Utah Sensitive Species

UT-LN-52: Noxious Weeds

UT-LN-65: Old Spanish Trail

UT-LN-99: Regional Ozone Formation Controls

UT-LN-102: Air Quality Analysis

UT0512-004

T. 25 S., R. 4 W., Salt Lake

Sec. 33: S2, NE, SENW excluding RR ROW SL039639;

Secs. 34 and 35: All.

1,801.89 Acres

Sevier County, Utah

Richfield Field Office

STIPULATIONS

UT-S-01: Air Quality

UT-S-102: Fragile Soils/ Slopes 30 percent or Greater

UT-S-233: Crucial Mule Deer and Elk Winter Habitat

NOTICES

UT-LN-40: Golden Eagle Habitat

UT-LN-45: Migratory Bird

UT-LN-49: Utah Sensitive Species

UT-LN-52: Noxious Weeds

UT-LN-65: Old Spanish Trail

UT-LN-99: Regional Ozone Formation Controls

UT-LN-102: Air Quality Analysis

UT0512-005

T. 26 S., R. 4 W., Salt Lake

Sec. 1: Lot 4, NESW, S2SW, SE;

Secs. 10, 11 and 12: All.

2,239.32 Acres

Sevier County, Utah

Richfield Field Office

STIPULATIONS

UT-S-01: Air Quality

UT-S-102: Fragile Soils/ Slopes 30 percent or Greater

UT-S-233: Crucial Mule Deer and Elk Winter Habitat

NOTICES

UT-LN-40: Golden Eagle Habitat

UT-LN-45: Migratory Bird

UT-LN-49: Utah Sensitive Species

UT-LN-52: Noxious Weeds

UT-LN-65: Old Spanish Trail

UT-LN-99: Regional Ozone Formation Controls

UT-LN-102: Air Quality Analysis

UT0512-007

T. 26 S., R. 4 W., Salt Lake

Sec. 13: All;

Sec. 14: Lots 1, 5-12, NE, W2NW;

Sec. 15: Lots 1-3, E2, E2W2, NWNW.

1,712.70 Acres

Sevier County, Utah

Richfield Field Office

STIPULATIONS

UT-S-01: Air Quality

UT-S-102: Fragile Soils/ Slopes 30 percent or Greater

UT-S-233: Crucial Mule Deer and Elk Winter Habitat

NOTICES

UT-LN-40: Golden Eagle Habitat

UT-LN-45: Migratory Bird

UT-LN-49: Utah Sensitive Species

UT-LN-52: Noxious Weeds

UT-LN-65: Old Spanish Trail

UT-LN-99: Regional Ozone Formation Controls

UT-LN-102: Air Quality Analysis

UT0512-008

T. 26 S., R. 4 W., Salt Lake

Sec. 17: E2, E2W2;

Sec. 20: Lot 4, NE, NESE;

Sec. 21: Lots 2-4, 6-8, N2NW, SWNW, N2SW, NWSE.

1,045.42 Acres

Sevier County, Utah

Richfield Field Office

STIPULATIONS

UT-S-01: Air Quality

UT-S-102: Fragile Soils/ Slopes 30 percent or Greater

UT-S-233: Crucial Mule Deer and Elk Winter Habitat

UT-S-276: Bald Eagle Winter Roost Habitat

NOTICES

UT-LN-40: Golden Eagle Habitat

UT-LN-45: Migratory Bird

UT-LN-49: Utah Sensitive Species

UT-LN-52: Noxious Weeds

UT-LN-99: Regional Ozone Formation Controls

UT-LN-102: Air Quality Analysis

LEASE STIPULATIONS SUMMARY

UT-S-01	<p style="text-align: center;">AIR QUALITY</p> <p>All new and replacement internal combustion gas field engines of less than or equal to 300 design-rated horsepower shall not emit more than 2 grams of NO_x per horsepower-hour.</p> <p>Exception: This requirement does not apply to gas field engines of less than or equal to 40 design-rated horsepower.</p> <p>Modification: None</p> <p>Waiver: None</p> <p>AND</p> <p>All new and replacement internal combustion gas field engines of greater than 300 design rated horsepower must not emit more than 1.0 gram of NO_x per horsepower-hour.</p> <p>Exception: None</p> <p>Modification: None</p> <p>Waiver: None</p>
UT-S-102	<p style="text-align: center;">CONTROLLED SURFACE USE – FRAGILE SOILS/SLOPES 30 PERCENT OR GREATER</p> <p>No surface disturbing proposed projects involving construction on slopes greater than 30 percent. If the action cannot be avoided, rerouted, or relocated than a proposed project will include an erosion control strategy, reclamation and a site plan with a detailed survey and design completed by a certified engineer. This proposed project must be approved by the BLM prior to construction and maintenance.</p> <p>Exception: None</p> <p>Modification: None</p> <p>Waiver: None</p>
UT-S-233	<p style="text-align: center;">TIMING LIMITATION - CRUCIAL MULE DEER AND ELK WINTER HABITAT</p> <p>No surface disturbing activities within crucial mule deer and elk habitats from December 15 through April 15 to protect winter habitats.</p> <p>Exception: This stipulation does not apply to the maintenance and operation of existing and ongoing facilities. An exception may be granted by the authorized officer if the operator submits a plan that demonstrates that impacts from the proposed action can be adequately mitigated or it is determined the habitat is not being used during the winter period for any given year.</p> <p>Modification: The authorized officer may modify the boundaries of the stipulation area if (1) a portion of the area is not being used as crucial winter range by deer/elk, (2) habitat outside of stipulation boundaries is being used as crucial winter range and needs to be protected, or (3) the migration patterns have changed causing a difference in the season of use.</p> <p>Waiver: A waiver may be granted if the winter range habitat is unsuitable or unoccupied during winter months by deer/elk and there is no reasonable likelihood of future winter range use.</p>

UT-S-276	<p style="text-align: center;">CONTROLLED SURFACE USE/TIMING LIMITATIONS – BALD EAGLE</p> <p>The Lessee/Operator is given notice that the lands in this parcel contains nesting/winter roost habitat for the bald eagle, a federally listed species. Avoidance or use restrictions may be placed on portions of the lease. Application of appropriate measures will depend on whether the action is temporary or permanent, and whether it occurs within or outside the bald eagle breeding or roosting season. A temporary action is completed prior to the following breeding or roosting season, leaving no permanent structures and resulting in no permanent habitat loss. A permanent action continues for more than one breeding or roosting season and/or causes a loss of eagle habitat or displaces eagles through disturbances (e.g., creation of a permanent structure). The following avoidance and minimization measures have been designed to ensure activities carried out on the lease are in compliance with the Endangered Species Act (ESA). Integration of, and adherence to, these measures will facilitate review and analysis of any submitted permits under the authority of this lease. Following these measures could reduce the scope of ESA Section 7 consultation at the permit stage.</p> <p>Current avoidance and minimization measures include the following:</p> <ol style="list-style-type: none"> 1. Surveys will be required prior to operations, unless species occupancy and distribution information is complete and available. All surveys must be conducted by qualified individual(s), and be conducted according to protocol. 2. Lease activities will require monitoring throughout the duration of the project. To ensure desired results are being achieved, minimization measures will be evaluated and, if necessary, Section 7 consultation reinitiated. 3. Water production will be managed to ensure maintenance or enhancement of riparian habitat. 4. Temporary activities within 1.0 mile of nest sites will not occur during the breeding season of January 1 to August 31, unless the area has been surveyed according to protocol and determined to be unoccupied. 5. Temporary activities within 0.5 miles of winter roost areas, e.g., cottonwood galleries, will not occur during the winter roost season of November 1 to March 31, unless the area has been surveyed according to protocol and determined to be unoccupied. 6. No permanent infrastructure will be placed within 1.0 mile of nest sites. 7. No permanent infrastructure will be placed within 0.5 miles of winter roost areas. 8. Remove big game carrion from within 100 feet from lease roadways occurring within bald eagle foraging range. 9. Avoid loss or disturbance to large cottonwood gallery riparian habitats. 10. Where technically and economically feasible, use directional drilling or multiple wells from the same pad to reduce surface disturbance and eliminate drilling in suitable habitat. Utilize directional drilling to avoid direct impacts to large cottonwood gallery riparian habitats. Ensure that such directional drilling does not intercept or degrade alluvial aquifers. 11. All areas of surface disturbance within riparian areas and/or adjacent uplands should be re-vegetated with native species. <p>Additional measures may also be employed to avoid or minimize effects to the species between the lease sale stage and lease development stage. These additional measures will be developed and implemented in consultation with the U.S. Fish and Wildlife Service to ensure continued compliance with the ESA.</p> <p>Exception: None Modification: None Waiver: None</p>
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LEASE NOTICES SUMMARY

UT-LN-40	<p style="text-align: center;">GOLDEN EAGLE HABITAT</p> <p>The lessee/operator is given notice that lands in this lease have been identified as containing Golden Eagle Habitat. Modifications to the Surface Use Plan of Operations may be required in order to protect the Golden Eagle and/or habitat from surface disturbing activities in accordance with Section 6 of the lease terms, Endangered Species Act, and 43 CFR 3101.1-2.</p>
UT-LN-45	<p style="text-align: center;">MIGRATORY BIRD</p> <p>The lessee/operator is given notice that surveys for nesting migratory birds may be required during migratory bird breeding season whenever surface disturbances and/or occupancy is proposed in association with fluid mineral exploration and development within priority habitats. Surveys should focus on identified priority bird species in Utah. Field surveys will be conducted as determined by the authorized officer of the Bureau of Land Management. Based on the result of the field survey, the authorized officer will determine appropriate buffers and timing limitations. This notice may be waived, excepted, or modified by the authorized officer if either the resource values change or the lessee/operator demonstrates that adverse impacts can be mitigated.</p>
UT-LN-49	<p style="text-align: center;">UTAH SENSITIVE SPECIES</p> <p>The lessee/operator is given notice that no surface use or otherwise disruptive activity would be allowed that would result in direct disturbance to populations or individual special status plant and animal species, including those listed on the BLM sensitive species list and the Utah sensitive species list. The lessee/operator is also given notice that lands in this parcel have been identified as containing potential habitat for species on the Utah Sensitive Species List. Modifications to the Surface Use Plan of Operations may be required in order to protect these resources from surface disturbing activities in accordance with Section 6 of the lease terms, Endangered Species Act, Migratory Bird Treaty Act and 43 CFR 3101.1-2.</p>
UT-LN-52	<p style="text-align: center;">NOXIOUS WEEDS</p> <p>The lessee/operator is given notice that lands in this lease have been identified as containing or are near areas containing noxious weeds. Best management practices to prevent or control noxious weeds may be required for operations on the lease.</p>
UT-LN-65	<p style="text-align: center;">OLD SPANISH TRAIL</p> <p>The lessee/operator is given notice that lands in this lease are crossed by the Old Spanish Trail National Historic Trail [Old Spanish Trail Recognition Act of 2002, (Old Spanish Trail PLO 107-325)]. Modifications to the Surface Use Plan of Operations may be required in order to protect the historic integrity of the trail. Coordination with the National Park Service may be necessary.</p>
UT-LN-99	<p style="text-align: center;">REGIONAL OZONE FORMATION CONTROLS</p> <p>To mitigate any potential impact oil and gas development emissions may have on regional ozone formation, the following Best Management Practices (BMPs) would be required for any development projects:</p> <ul style="list-style-type: none"> • Tier II or better drilling rig engines • Stationary internal combustion engine standard of 2g NOx/bhp-hr for engines <300HP and 1g NOx/bhp-hr for engines >300HP • Low bleed or no bleed pneumatic pump valves • Dehydrator VOC emission controls to +95% efficiency • Tank VOC emission controls to +95% efficiency

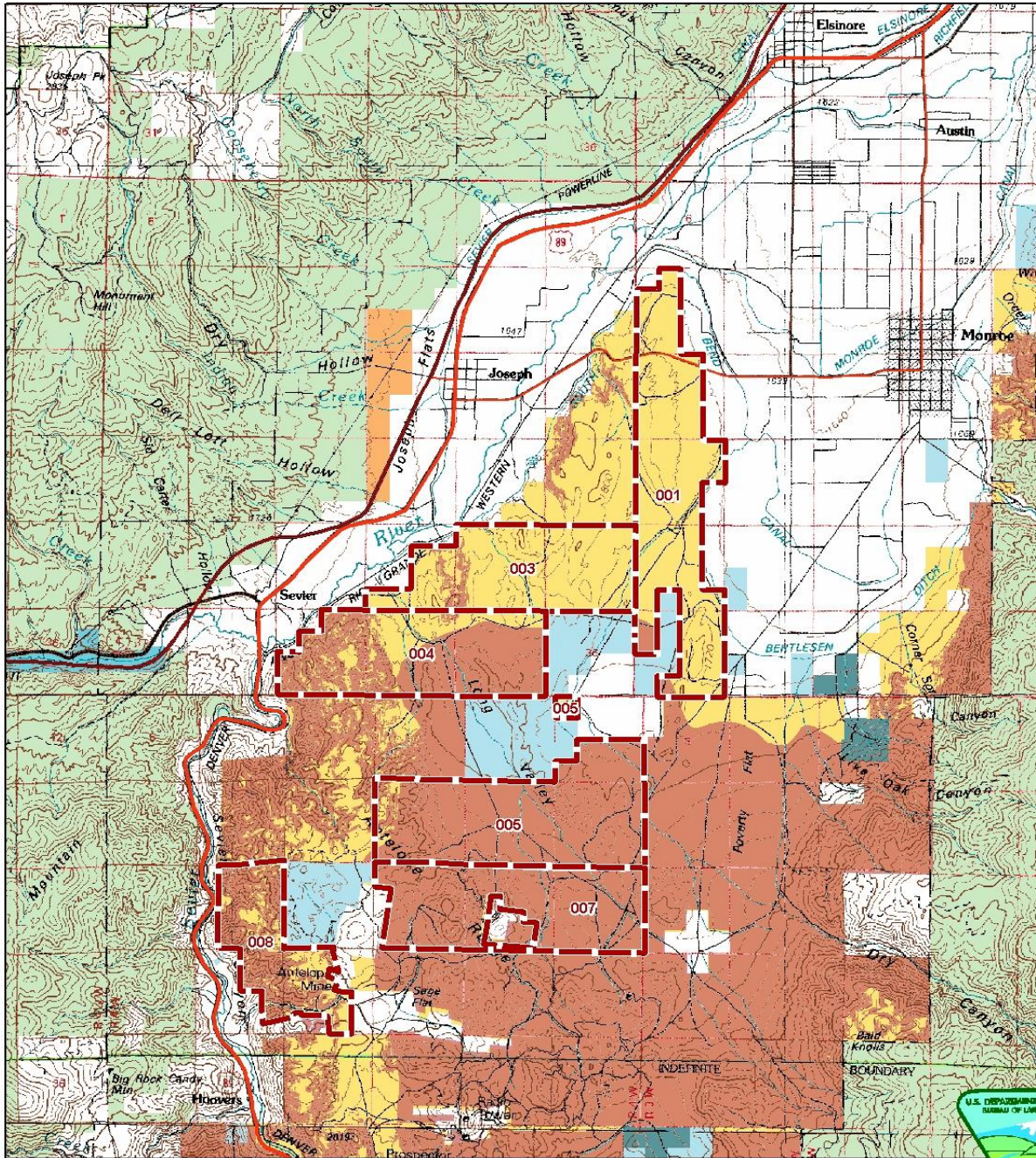
UT-LN-102	<p style="text-align: center;">AIR QUALITY ANALYSIS</p> <p>The lessee/operator is given notice that prior to project-specific approval, additional air quality analyses may be required to comply with the National Environmental Policy Act, Federal Land Policy Management Act, and/or other applicable laws and regulations. Analyses may include dispersion modeling for deposition and visibility impacts analysis, control equipment determinations, and/or emission inventory development. These analyses may result in the imposition of additional project-specific air quality control measures.</p>
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**APPENDIX B
MAP OF PARCELS**

November 2012 Lease Sale

June 20, 2012

BLM



Legend



Oil and Gas Category



APPENDIX C
INTERDISCIPLINARY TEAM CHECKLIST

INTERDISCIPLINARY TEAM CHECKLIST**Project Title:** November 2012 Oil and Gas Lease Sale**NEPA Log Number:** DOI-BLM-UT-C020-2011-0043-EA**File/Serial Number:** Not Applicable**Project Leader:** Stan Andersen**DETERMINATION OF STAFF:**

NP = not present in the area impacted by the proposed or alternative actions

NI = present, but not affected to a degree that detailed analysis is required

PI = present with potential for relevant impact that need to be analyzed in detail in the EA

NC = (DNAs only) actions and impacts not changed from those disclosed in the existing NEPA documents cited in Section D of the DNA form. The Rationale column may include NI and NP discussions.

Determi- nation	Resource	Rationale for Determination	Signature	Date
RESOURCES AND ISSUES CONSIDERED (INCLUDES SUPPLEMENTAL AUTHORITIES APPENDIX H-1790-1)				
PI	Air Quality	Leasing would have no impact on air quality. However, there is some expectation that exploration could occur. Any ground disturbing activity would have to first be authorized as a lease operation but only through additional NEPA analysis. Activities which may be authorized on these parcels subsequent to the lease sale may produce emissions of regulated air pollutants and/or pollutants that could impact air quality related values. Emissions from earth-moving equipment, vehicle traffic, drilling and completion activities, separators, oil storage tanks, dehydration units, and daily tailpipe and fugitive dust emissions could affect air quality. Hazardous air pollutants (HAPs) are those pollutants that are known or suspected to cause cancer or other serious health effects, such as reproductive effects or birth defects, or adverse environmental impacts. The EPA has classified 187 air pollutants as HAPs. Examples of listed HAPs associated with the oil and gas industry include formaldehyde, benzene, toluene, ethylbenzene, isomers of xylene (BTEX) compounds, and normal-hexane (n-hexane). There are no applicable Federal or State of Utah ambient air quality standards for assessing potential HAP impacts to human health. Application of stipulation UT-S-01 and lease notices UT-LN-99 and UT-LN-102 are warranted.	Leonard Herr	3/26/2012
NP	Areas of Critical Environmental Concern	No ACECs are present.	Noelle Glines-Bovio	8/16/2011
NP	BLM Natural Areas	None present.	Noelle Glines-Bovio	8/30/11

Determination	Resource	Rationale for Determination	Signature	Date
PI	Cultural Resources	<p>A cultural resource records search was completed for lands involved with the subject lease sale parcels. The six parcels being offered for lease have had only a very few cultural resource inventories done either within them or near them. Within the last few years, seismic line cultural resource inventories have recorded only seven archaeological sites within these parcels. Only site 42SV2811 (located in Parcel 006) is considered to be eligible to the National Register. In addition, Parcel 002 contains some unrecorded pictograph panels that would no doubt qualify for National Register listing. Parcels UT0512-002 and UT0512-006 should be deferred from leasing.</p> <p>If actual surface-disturbing activities result from the lease, site specific cultural resource inventories will be conducted and appropriate Section 106 consultation will be done. Given the low site densities on these parcels, it is likely that wells could be located there without disturbing any archaeological or historic sites that may be present. On parcel 002 the situation is different because of the significant nature of the pictographs located there. Locating a well near this site would not be in keeping with either the nature of the site there or the surrounding area which has not been examined for cultural remains. "The introduction of visual, atmospheric or audible elements that diminish the integrity of the property's significant historic features" is the criteria of adverse effect that is being used to support this conclusion. It can be found in the regulations of the National Historic Preservation Act at 36 CFR 800.5a (2) (v). The Utah SHPO concurred with our recommendation on this lease sale by letter dated January 3, 2012.</p> <p>Also, the probable location of the Old Spanish Trail (OST) lies within parcels proposed to be listed. As per the visual resource inventory report (Logan Simpson Design Inc, 2011) prepared for the Richfield Field Office, high potential segments are not located within the subject parcels. Lease Notice UT-LN-65 should be added to parcels 003, 004, 005, and 007.</p>	Craig Harmon	3/22/12
NI	Environmental Justice	<p>As defined in EO 12898, minority, low income populations and disadvantaged groups may be present within the counties involved in this lease sale. However, all citizens can file an expression of interest or participate in the bidding process (43 CFR §3120.3-2). The stipulations and notices applied to the subject parcels do not place an undue burden on these groups. Leasing would not</p>	Stan Andersen	3/26/2012

Determination	Resource	Rationale for Determination	Signature	Date
		adversely or disproportionately affect minority, low income or disadvantaged groups.		
NP	Farmlands (Prime or Unique)	There are parcels that have very small areas near the Sevier River that qualify as 'prime farmland if irrigated'. However, all available irrigation water has been allocated and there is no possibility of these lands being allocated any irrigation water. Therefore no prime or unique farmlands are present.	Brant Hallows	3/27/12
NI	Fish and Wildlife	Crucial deer and elk winter/spring range occurs on all six parcels. The application of stipulation UT-S-233 is warranted on all parcels.	Larry Greenwood	8-15-11
NI	Floodplains	The lease sale and application of stipulations/notices would not affect a county's ability to obtain and/or maintain Federal flood insurance. Through design features, BLM would avoid occupancy and modification of floodplain development. The hazard degree is low. Impacts to floodplains are not expected to reach a level that would require adding a lease notice to any of the parcels. Refer also to the riparian and wetland areas discussion. Also, the proposed action will not increase the risk of flooding or damage to human life and property and it will not be contrary to Executive Order 11988 – Floodplain Management.	Brant Hallows	3/27/12
NI	Fuels/Fire Management	The proposed action only conveys a right to explore and develop mineral resources, subject to the lease terms and the applicable laws and regulations. If on-the-ground operations, such as geophysical exploration or drilling were to occur, an additional analysis for fire and/or fuels management would be required.	Bob Bate	8/18/11
NI	Geology / Mineral Resources/Energy Production	The RMP/FEIS adequately addresses the impacts of oil and gas and stipulations for leasing and drilling/production operations in those specific sections on minerals and energy Chapters 3 and 4 and Appendices' 11 and 12 of the RMP/FEIS. Exploration/Production of Oil and Gas would have a positive impact under these criteria and be consistent with goals and policy of the RMP/FEIS.	John Reay	8/18/11
NI	Invasive Species/Noxious Weeds (EO 13112)	The BLM coordinates with County and local governments to conduct an active program for control of invasive species. The lessee/operator is given notice that lands in this lease have been identified as containing or are near areas containing noxious weeds. Standard operating procedures such as washing of vehicles and annual monitoring and spraying along with site specific mitigation applied as conditions of approval (COA) at the APD stage should be sufficient to prevent the spread or introduction of Invasive, Non-native species. All disturbed areas and piles	Burke Williams	8/18/11

Determination	Resource	Rationale for Determination	Signature	Date
		<p>of top soil should be reseeded with weed free seed the first fall after the disturbance is made to provide competition against weeds.</p> <p>Other constraints, including the use of certified weed free seed and vehicle/equipment wash stations, would be applied as necessary at the APD stage as documented in filing plans and conditions of approval. Control measures would be implemented during any ground disturbing activity. Treatment will occur as part of regular operations, BMPs, SOPs and site specific mitigation applied at the APD stage as COAs.</p> <p>Negligible impacts would be expected as a result of leasing and exploration. All disturbed areas and piles of top soil should be reseeded with weed free seed the first fall after the disturbance is made to provide competition against weeds.</p> <p>Application of UT-LN-52 is warranted.</p>		
NI	Lands/Access	<p>As described, the proposed action would not affect access to public land. No roads providing access to public land would be closed on a long term basis. Any proposed project would be subject to valid prior existing rights including county-maintained roads (See BLM internal/public Master Title Plat web site). Any operations would be coordinated with right-of-way (ROW) Holders and adjacent non-federal landowners. Off-lease ancillary facilities that cross public land, if any, may require a separate authorization. It is anticipated that existing ROWs in proposed operation areas would not be affected because site specific mitigation applied at the APD stage, including the ability to move operations up to 200 meters, would ensure that existing ROWs would be avoided, restored, or replaced if damaged. Some of the described parcels are located within an identified ROW corridor (See January 2009 Approved RMP Amendments/Record of Decision [ROD] for Designation of Energy Corridors on BLM Administered lands in the 11 Western States; and October 2008 Approved RFO RMP Table 5-9 and associated conditions of use. Potential issues include but are not limited to surface disturbance within and outside described project areas and removal of any generated trash/debris from public land and discarded at an authorized facility.</p>	Nancy DeMille	08/15/11
NI	Livestock Grazing/Range	<p>Lease of the parcels will not impact livestock grazing within the identified grazing allotments. However, there is an inherent expectation that there may be oil or gas activities on each leased parcel. Any activity that involves surface disturbance or direct resource impacts would have</p>	Burke Williams	8/18/11

Determination	Resource	Rationale for Determination	Signature	Date
		to be authorized as a lease operation through future NEPA analysis, on a case-by-case basis. Impacts to livestock grazing may occur as a result of subsequent actions including exploration development, production, etc. Therefore, reclamation provisions/procedures including revegetation (utilizing appropriate seed mix based on the ecological site, elevation and topography) and road reclamation. Range improvement project replacement/restoration (fences, cattle guards, etc.), noxious weed controls, would be identified in future NEPA/Decision documents on a case-by-case basis. In addition, if any range improvement projects could be impacted by wells or associated infrastructure, wells would be moved 200 meters to avoid these impacts 43 CFR 3101.1-2. The issues identified above would be addressed further on a project site specific level if an APD is filed.		
NI	Migratory Birds	Migratory birds occur on all six parcels. The application of lease notice UT-LN-45 is warranted on all parcels.	Larry Greenwood	8-15-11
PI	Native American Religious Concerns	Letters containing notification of this lease sale and the results of our cultural resources records search were sent to the following Tribes on November 17, 2011: Paiute Indian Tribe of Utah, Ute Indian Tribe, Hopi Tribe, Navajo Nation, Utah Navajo Commission, Southern Ute Tribe, Ute Mountain Ute, White Mesa Ute, San Juan Southern Paiute, Kaibab Paiute Tribe, Moapa Band of Paiute Indians, the Northwest Band of Shoshone and the Fallon Paiute-Shoshone Tribe. Two tribes have responded to date: the Navajo state that there would be no impact to the tribe, and the Hopi wish to be kept informed of any activity on the leases and requested that parcels 002 and 006 be withdrawn from the lease sale. If any additional concerns are raised by the tribes, those concerns will be addressed as necessary. Additional consultation will be conducted should site-specific use authorization requests be received. As the proposal becomes more site-specific, tribes will again be notified and given further opportunity for comment.	Craig Harmon	3/22/12
NI	Paleontology	A paleontological review of the lease parcels was completed that determined that the area contains lands that are of moderate and low sensitivity. There are no known paleontological resources in this area. While drilling and other oil and gas exploration and recovery operations present the potential for damage of paleontological resources, existing laws, regulations and policies provide for mitigation of effects through avoidance or data	John Reay	3/28/12

Determination	Resource	Rationale for Determination	Signature	Date
		recovery efforts. If vertebrate fossils or other fossils of scientific interest are encountered they would be protected under existing regulatory authority (43CFR 3101.1-2). If vertebrate or other fossil remains of potential scientific value are encountered, operations will be suspended and a BLM representative notified so that the find can be evaluated. Facility siting, design and operational timing may also be modified to protect paleontological and other resources under Standard Lease Terms (OFFER TO LEASE AND LEASE FOR OIL AND GAS, Form 3100-11).		
NI	Rangeland Health Standards & Guidelines	Leasing of these parcels would not impact Rangeland Health Standards. However, there is an inherent expectation that oil or gas activity could occur on any or all of the leased parcels. Any activity that involves surface disturbance or direct resource impacts would have to be authorized as a new project through future NEPA analysis, on a case-by-case basis. It would be expected that reclamation procedures identified in the livestock grazing section would be required to ensure impacts to Rangeland Health Standards are minimized. The Gold Book standards also provide mechanisms to achieve Rangeland Health. These include weed control, siting considerations (e.g. well pad, contouring, road alignment), and re-vegetation. Design features necessary for the protection of water quality, soils, vegetation, threatened & endangered species habitat and other ecological features (rangeland health components) are incorporated. Refer also to the corresponding discussion in this checklist. Given the degree of anticipated exploration and application of SOPs, BMPs and design features applied at the APD stage as conditions of approval it is concluded that rangeland health standards would be met.	Burke Williams	8/18/11
NI	Recreation	Leasing fluid minerals in a dispersed recreational management area may have no impact to the recreational resources. Construction activities (traffic, noise, dust, visual impacts, etc.) within an area may displace some recreationist for a short time. Once the construction of an area has decreased most recreationists would return to use the areas.	Noelle Glines-Bovio	8/16/2011
PI	Socio-Economics	Drilling an exploration well could impact the local social structure and economy. For the short-term, land surveyors, landmen, construction crews, drilling crews, and logging crews would be involved during the drilling phase. Construction could take 10 to 20 days and drilling operations are	Stan Andersen	8/16/2011

Determination	Resource	Rationale for Determination	Signature	Date
		<p>expected to take about 60 to 90 days. This activity would lead to work crews lodging in local facilities with subsequent of expenditures in local markets. If the well is producible in paying quantities, the local social structure and economy could experience long-term impacts. These impacts could result in beneficial economic development, a need for additional infrastructure to provide goods and services to work forces, and possible changes to the economic and social base of the local community. Production could lead to additional exploration and development, increased oil and gas activities, additional employment, and royalties. Long term impacts could be in the range of 10-40 years.</p>		
PI	Soils/Watersheds	<p>If development occurs the Proposed Action could result in direct impacts to soils including loss of topsoil and its productivity, soil compaction and sedimentation into the Sevier River watershed. These impacts are discussed further in Chapter 4.0 of the EA. The application of stipulation UT-S-102 is warranted.</p>	Brant Hallows	3/27/12
NI	Special Status Plant & Animal Species other than FWS candidate or listed species	<p>The Burrowing Owl and its habitat are found within five of the identified parcels (UT0512-001, UT0512-003 through UT0512-005 and UT0512-007. Lease Notice UT-LN-49 is warranted for these parcels.</p> <p>Habitat for the sensitive Ferruginous Hawk is found within all six parcels. Application of lease notice UT-LN-49 is warranted on all parcels.</p> <p>Golden Eagle habitat occurs on all six parcels and lease notice UT-LN-40 is warranted on all parcels.</p> <p>Bald Eagle Winter Roost Habitat is found within Parcel UT0512-008. The application of stipulation UT-S-276 is warranted.</p> <p>Washington Office BLM lease stipulation as directed by WO IM No. 2002-174 would apply to all parcels.</p> <p>Section 7 consultation with the U.S. Fish and Wildlife Service (FWS), the Utah BLM State Office has determined that consultation has been completed for all lease sales as follows: In October, 2008, a Biological opinion from the FWS was a portion of the approved RMP. BLM and FWS personnel completed work on set of lease notices for listed species that are to be attached to oil and gas leases offered in the State. The notices contain current avoidance and minimization measures that if followed could reduce the scope of Section 7 consultation at the permit stage. FWS responded with a memorandum which basically stated the following: "We concur that the</p>	Larry Greenwood	8-15-11

Determination	Resource	Rationale for Determination	Signature	Date
		sale of oil and gas lease parcels, with the species-specific lease notices, results in a "not likely to adversely affect" determination." The State Office will send the findings of this report to the Utah Ecological Services Field Office in Salt Lake City reporting any threatened and endangered species found on the parcels and all applicable lease notices in order to complete informal consultation for this lease sale.		
NP	Threatened, Endangered or Candidate Plant Species	No Threatened, Endangered, Candidate or Sensitive Plant Species are found within the proposed lease parcels.	Larry Greenwood	8-15-11
NP	Threatened, Endangered or Candidate Animal Species	There are no Threatened, Endangered or Candidate Animal Species found within the proposed lease parcels.	Larry Greenwood	8-15-11
NI	Vegetation	Leasing fluid minerals would have little or no impact on the vegetative resource of these parcels. The impact would happen if and when actual drilling etc. occurs on the parcel. If drilling is proposed, then the appropriate NEPA and its associated checklist will address impacts. If an Application to Drill Permit (APD) is received Best Management Practices (BMPs) and site specific design features to minimize disturbance to vegetation would be applied as Conditions of Approval.	Larry Greenwood	8-15-11
NI	Visual Resources	Leasing fluid minerals in a VRM class IV management area will have minimal impact. Visual impacts are normally evaluated on a case by case basis at the APD level. The construction phase may impact the local community of Monroe slightly with higher levels of dust and lights from drilling equipment through daylight hours. The rest of the leasing area is topographically screened from the surrounding communities. If placed correctly during the APD process oil and gas facilities would be difficult for the public to notice. All leasing activities would meet VRM Class IV objectives because VRM IV which allows for major modifications of the existing landscape and high/strong visual contrasts that dominate the landscape and the focus of viewer attention. However, impacts still need to be minimized. Upon reclamation of any drilling activities, visual resources would be improved greatly, provided reclamation is designed to restore the characteristic line and color elements present in the area.	Noelle Glines-Bovio	8/30/11
NI	Wastes (hazardous or solid)	There are no known Wastes in the area at present. Hazardous or solid wastes would not be created or stored at the leasing stage. BMPs, SOPs and design features would be applied at the APD stage as conditions of approval. The construction, drilling,	Randy Peterson	8/16/2011

Determination	Resource	Rationale for Determination	Signature	Date
		completion, testing, and production of an oil and gas well produce waste products including drilling and completion fluids and produced water. SOP's required by regulation, BMP, and COAs attached to approved APD would mitigate impacts and ensure proper containment and disposal of wastes generated from oil and gas activities. During any development or exploration all hazardous materials and solid wastes must be used, stored and disposed of in accordance with all state and federal laws and regulations. Impacts are not expected to occur as a result leasing.		
NI	Water Resources/Quality (drinking/surface/ground)	<p>The lease parcels do not occur within any Sole Source Aquifers or Drinking Water Source Protection Zones (DWSPZs).</p> <p>SOPs required by regulation and design features contained in an approved APD would be sufficient to isolate and protect all usable ground or surface water sources. The SOPs include the requirements for disposal of produced water contained in Onshore Oil and Gas Order (OOGO) No. 7 and the requirements for drilling operations contained in OOGO No. 2. Potential fresh water aquifers would be cased and cemented. The casing would be pressure tested to ensure integrity prior to drilling out the surface casing shoe plug.</p> <p>Potential impacts would be addressed and a design feature would be included utilizing IM No. UT 2010-055 prior to APD approval. Standard protocols would minimize possibility of releases (cased drill holes, no surface disturbance or occupancy would be maintained within 660 feet of any natural, new disturbance will be not be allowed in areas equal to the 100-year floodplain or 100 meters on either side of the center line of any stream, stream reach, or riparian area).</p>	Phil Zieg	3/28/12
NP	Wetlands/Riparian Zones	No Zones Present.	Larry Greenwood	8-15-11
NP	Wild and Scenic Rivers	None are present.	Noelle Glines-Bovio	8/30/11
NP	Wilderness/WSA	None are present.	Noelle Glines-Bovio	8/16/2011
NP	Wild Horses and Burros	This lease sale area is not included in any Wild Horse & Burro management area. None are present.	Chris Colton	8-16-2011
NI	Woodland/Forestry	Lease of the parcels will not impact woodland or forestry within the parcels. However, there is an inherent expectation that there may be oil or gas activities on each leased parcel. Any activity that involves surface disturbance or direct resource impacts would have to be authorized as a lease	Bob Bate	8/18/11

Determination	Resource	Rationale for Determination	Signature	Date
		operation through future NEPA analysis, on a case-by-case basis. Impacts to woodland/forestry products are expected to be minimal as the area is predominantly sagebrush and grass type with few scattered pinyon/juniper trees mainly on steeper hillsides. All product removed would be in accordance with all BLM guidelines.		
NI	Greenhouse Gas Emissions/Climate Change	<p>In addition to the air quality information contained within the governing LUP, new information about greenhouse gases (GHGs) and their effects on national and global climate conditions has emerged since LUP was prepared. Without additional meteorological monitoring and modeling systems, it is difficult to determine the spatial and temporal variability and change of climatic conditions; what is known is that increasing concentrations of GHGs are likely to accelerate the rate of climate change.</p> <p>Determining GHG emissions, their relationship to global climatic patterns, and the resulting impacts is an ongoing scientific process. The BLM does not have the ability to associate a BLM action's contribution to climate change with impacts in any particular area. The technology to be able to do so is not yet available. The inconsistency in results of scientific models used to predict climate change at the global scale coupled with the lack of scientific models designed to predict climate change on regional or local scales, limits the ability to quantify potential future impacts of decisions made at this level and determining the significance of any discrete amount of GHG emissions is beyond the limits of existing science. When further information on the impacts to climate change is known, such information would be incorporated into the BLM's planning and NEPA documents as appropriate.</p> <p>It is currently not feasible to know with certainty the net impacts from leasing and any potential exploration on climate. While BLM actions may contribute to the climate change phenomenon, the specific effects of those actions on global climate are speculative given the current state of the science. Leasing the subject parcels would have no direct impacts on climate as a result of GHG emissions. There is an assumption; however that leasing the parcels would lead to some type of exploration that would have indirect effects on global climate through GHG emissions. However, those effects on global climate change cannot be determined. It is unknown whether the petroleum resources specific to these parcels are gas or oil or</p>	Leonard Herr	3/26/2012

Determination	Resource	Rationale for Determination	Signature	Date
		a combination thereof. Since these types of data as well as other data are unavailable at this time, it is also unreasonable to quantify GHG emission levels.		

FINAL REVIEW:

Reviewer Title	Signature	Date	Comments
Environmental Coordinator	<i>Unsigned</i>	--	--
Authorized Officer	<i>Unsigned</i>	--	--

APPENDIX D
DEFERRED PARCEL LIST

DEFERRED PARCEL LIST

Date Nominated	Parcel Number	Legal Description	Acres	Reason Tract Postponed	Land Use Plan
July 1, 2011	UT0512 – 002 Sevier County, Utah Richfield Field Office	T. 25 S., R. 4 W., Salt Lake Sec. 12: NESE, S2SE; Sec. 13: E2, NESW, S2SW; Sec. 23: NESE, S2SE; Sec. 24: All.	1,320.00	Parcel contains important cultural site features. The Hopi Tribe requested that parcels 002 and 006 be withdrawn from the lease sale. Utah State Historic Preservation Officer (SHPO) has concurred.	Richfield RMP
July 1, 2011	UT0512 – 006 Sevier County, Utah Richfield Field Office	T. 26 S., R. 4 W., Salt Lake Secs. 3 and 4: All; Sec. 5: SESW, S2SE; Sec. 8: E2, E2W2; Sec. 9: All.	2,517.40	Parcel contains a national eligible cultural site. The Hopi Tribe requested that parcels 002 and 006 be withdrawn from the lease sale. Utah State Historic Preservation Officer (SHPO) has concurred.	Richfield RMP

APPENDIX E
OLD SPANISH TRAIL REPORT (LONG VALLEY UNIT)

Long Valley Analysis Unit

Historic Character: The Long Valley analysis unit is along the Northern Route of the Old Spanish Trail, which connected the Spanish colonial cities of Santa Fe and Los Angeles in the 18th and 19th centuries. The trail route commenced use in the 1700s, and reached its zenith in the 1830s and 1840s as a trade route for New Mexican blankets and Californian horses and mules (Hafen 1954). The Long Valley analysis unit route was verified using information from original research by Steven Madsen and Gregory Crampton, as well as investigations conducted by archaeologist Bob Leonard of Fish Lake National Forest. In addition to these sources, the path of travel was analyzed based on the assumption that the Old Spanish Trail continued to be used by later wagon roads, and thus General Land Office (GLO) survey plats of unnamed wagon roads from 1878, 1897, and 1899 GLO were also a basis for route verification.

Very little information regarding the character of the Long Valley analysis unit landscape during the period of significance was discovered. It is likely that both the Gunnison and Fremont expeditions traversed the vicinity of this analysis unit, however this remains unconfirmed. Of the Sevier River Valley, which lies approximately 1.5 miles from the northern end of the analysis unit, Orville Pratt wrote in 1848: "It was truly the loveliest spot, all things considered, my eyes have ever looked upon." (Pratt 1848 in Crampton and Madson 1994, 64) Gwinn Harris Heap, a member of the 1853 Beale Expedition, wrote this about the Sevier River Valley: "This valley lies north and south, and surpassed in beauty and fertility anything we had yet seen. It is about thirty miles in length by four in breadth, surrounded by mountains, down whose sides trickled numberless cool and limpid brooks, fringed with willows and cottonwoods. Sevier River flows through its centre, and it abounds in its entire breadth in rich pasturage. The mountains which enclose it were clothed, from summit to base, with oaks and pines." (Heap 1854, 88)

GLO plats demonstrate that by 1871, there was some development along the southern terminus of Long Valley analysis unit, as a "J.F. Hulle Ranch," is noted, along with a system of county roads. By 1878, a road is depicted traversing Long Valley, and seven structures were noted within a four-mile radius of the northern end of the analysis unit.

The archeological survey noted artifacts (including glass fragments and hole-in-cap cans) which likely date to the late 19th and early 20th century along this analysis unit.

Existing Condition: The Long Valley analysis unit is 9.3 miles long; 8.1 miles are located on BLM lands. The trail starts nearly two miles due east of Sevier and generally travels south to about two miles northeast of Marysvale.

The trail trace is visibly different at each of the three IOPs in this survey. At IOP LV-1, the trail trace is a two-track road, while at IOP LV-5, it is evident only as a clearing in the trees and a faint swale. At IOP LV-7, the trail trace has been overlain by a bladed road.

IOP LV-1 is located atop a small hill adjacent to the trail trace. There are views of the surrounding valleys and mountains in most directions. To the west, there are views of settlement, including the I-70 corridor, in the valley near Sevier. IOP LV-5 is located in a grove of cedars and piñon pines near Monroe Mountain Road. A large transmission line and a few mining operations are visible from this IOP. IOP LV-7 is located along a bladed road overlooking the community of Marysvale and associated development.

Non-contributing and non-compatible with historic setting character: The most noticeable non-historic feature in the historic setting of this trail segment is of the developed landscape associated with Sevier visible from IOP LV-1 and with Marysville visible from IOP LV-7.

Non-contributing but compatible with historic setting character: There are several two-track roads that are relatively unobtrusive, and are therefore compatible with the historic character.

Integrity assessment: The Long Valley analysis unit's historic setting has diminished historic integrity.

Aspect	Assessment	Justification
Location	Diminished	The sections of verified trail trace are disconnected and sparse along this analysis unit.
Design	Not applicable	No elements of trail related design were identified along this analysis unit.
Setting	Diminished	At two the IOPs, there are prominent views to the adjacent communities. At the third IOP, there is a large transmission line.
Materials	Not applicable	No elements of trail related materials were identified along this analysis unit.
Workmanship	Not applicable	No elements of trail related workmanship were identified along this analysis unit.
Feeling	Diminished	Because of the bladed roads, adjacent development, and transmission lines, the historic feeling if this analysis unit's setting is compromised.
Association	Retained	This route is still associated with travel and transport.

Inventory of Features Contributing and Non-Contributing to Historic Character, Long Valley

Characteristic	Feature	Contributing to Character	If NC, Compatible?	Description
Terrain	Long Valley	C		This valley is generally north-south in the area of this analysis unit.
Terrain	Antelope Range	C		Located to the south west of IOP LV-01.
Terrain	Marysville Valley	C		Seen from IOP LV-07.
Terrain	White Hills	C		Seen to the east of IOP LV-07.
Hydrology	Sevier River	C		Runs through Sevier and Marysville.
Circulation	Monroe Mountain Road	NC	N	IOPs LV-05 and -07 are located along this bladed road.
Circulation	Interstate 70	NC	N	Can be seen near Sevier.
Circulation	Route 89	NC	N	Can be seen near Sevier and Marysville.
Buildings and Structures	Sevier	NC	N	Seen from IOP LV-01.
Buildings and Structures	Marysville	NC	N	Seen from IOP LV-07.
Buildings and Structures	Transmission line	NC	N	Seen from IOP LV-05.

Buildings and Structures	Mining operations	NC	N	Seen from IOP LV-05.
Vegetation	Agricultural fields	NC	N	Seen from IOPs LV-01 and -07.
Vegetation	Piñon pines and juniper	C		Seen at IOP LV-05.
Vegetation	Low arid grasses and sage	C		Throughout the analysis unit.

Integrity Assessment by IOP, Long Valley Analysis Unit

IOP Number	Historic Character	Existing Condition	Historic Setting Integrity
LV-01	No historic information was found about this specific location.	On a hilltop with a rock cairn overlooking Sevier and associated communities to the west and Long Valley to the southeast.	Integrity is retained to the north, east, and south. Integrity is diminished to the west.
LV-05	No historic information was found about this specific location.	On a hill off of Monroe Mountain Road, the trail route is in a forest of piñon pines and junipers. Visibility is limited by vegetation, but there are views to a large transmission line and a mining operation.	Integrity is retained to the north, northeast, south and west. Integrity is diminished to the northwest and southeast.
LV-07	No historic information was found about this specific location.	On Monroe Mountain Road, this is also the trail trace (that has been bladed). Views to the west of Marysvale and the Marysvale Valley agricultural communities.	Integrity is retained to the north, east, and southeast. Integrity is diminished to the west and southwest.